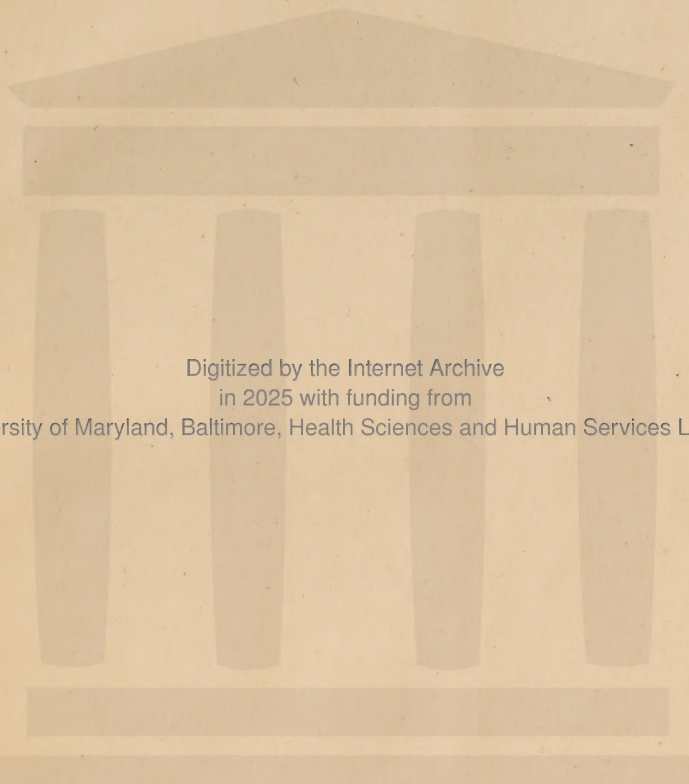


HELEN K. HARRIS LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE



Digitized by the Internet Archive
in 2025 with funding from
University of Maryland, Baltimore, Health Sciences and Human Services Library

THE Journal

OF THE
BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND



MESSAGE TO THE ALUMNI	1
WADSWORTH C. TROJAKOWSKI '23	2
MARYLAND DENTISTS HONOR DR. ROBINSON	4
THE 1942 COMMENCEMENT: REUNIONS	5
PREDENTAL NODDINGS	9
PARTIAL DENTURE IMPRESSIONS	10
THE FRESHMAN CLASS	15
CHEMOTHERAPY WITH SULFAPYRIDINE	17
INCIDENT AT NATCHEZ: 1828	21
ALUMNI NEWS	23
STUDENT ACTIVITIES	25

VOLUME 7

September, 1942

NUMBER 1

THE *Journal*

OF THE

BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND

VOL. 7

No. 1

EDITORIAL STAFF

Editor

GARDNER P. H. FOLEY

Alumni Editor

DORSEY R. TIPTON

Business Manager

B. A. DABROWSKI

Advisory Board

GEORGE M. ANDERSON

BURT B. IDE

J. BEN ROBINSON

Student Staff

L. DAVITZ, Junior, Chairman

J. P. BLEVINS, Senior

H. A. RADLER, Sophomore

H. S. FINE, Junior

R. GHILOTTI, Freshman

R. H. SMITH, Junior

J. E. MARKEL, Freshman

12772

The Journal of the Baltimore College of Dental Surgery is published irregularly by the Faculty, the Students and the National Alumni Association of the Baltimore College of Dental Surgery, Dental School, University of Maryland; and the Grieves Library Foundation of the Maryland State Dental Association.

Made in United States of America

Message to the Alumni

IN ASSUMING the presidency of the Alumni Association of the Dental School, I do so with a full consciousness of the critical times through which we are passing and the effect the war effort will have on the success of my administration. The great task before us is to contribute our fullest strength to winning the struggle for democracy. Nothing less than the greatest effort and the fullest sacrifice will be sufficient.

However, in striving to win the war we must also be planning for a lasting peace. Such a peace will be determined largely by our preparedness for it, and preparedness will depend measurably upon the strength and fitness of peace-time institutions to contribute their part. These service institutions upon which both war and peace depend must not be allowed to fall into disuse and to manifest a loss of effective interest.

In line with this thought we as alumni of a great Dental School must strive to maintain numerical strength in membership and to keep alive an interest in the College during these years of stress. The fight for democracy has penetrated every activity of American life and has caused dislocations that have materially changed our outlooks. Many of our alumni have responded to the call to active duty: many are now serving on foreign soil; some have even at this early stage made the supreme sacrifice. But in the face of these situations we should demonstrate our courage, and those of us who remain on the home front should make a greater effort and should take the full burden of carrying on for those who are on the fighting front.

May I, therefore, appeal to all alumni to become active at this time in order to strengthen our cause for future usefulness. In war time the College continues intensively its functions to meet the national crisis. All of us take pride in its splendid achievements and the esteem in which it is held among dental schools. Nothing is of greater value to its continuing usefulness than a strong, interested, helpful alumni group. To those who are paid members we express our appreciation; from those who have not yet contributed a material part in keeping the alumni organization alive we urgently solicit cooperation.

The Alumni Association had planned an alumni dinner for the Boston meeting of the A.D.A. But transportation problems suggested the wisdom of postponing the meeting; therefore, the dinner had to be abandoned. The purpose of the dinner was twofold: first, to provide an opportunity for a get-together of our many alumni practicing in the East; and second, to do honor to our Dean, Dr. J. Ben Robinson, who will be inducted into office as President of the A.D.A. for the coming year. In view of the fact that we are disappointed in not being able to do Dean Robinson honor as planned, may I suggest that we compensate our disappointment by increasing our alumni membership to a new high level in support of his efforts to advance the work at the College. We have an alumni body of about 3600 and a membership in the Association of about 400. We can easily double or treble that number. You are earnestly solicited to become active in behalf of the College to which we owe so much.

Fraternally,

JAMES H. SAMUEL, '14, President
National Alumni Association
Baltimore College of Dental Surgery
Dental School, University of Maryland

Wadsworth C. Trojakowski

Commander Wadsworth Caesar Trojakowski, D.C., U. S. Navy, the first son of the B. C. D. S. to die in the service of our country in the great conflict we are now waging, was killed in action during the Battle of the Coral Sea. Commander Trojakowski "was doing fine work in caring for casualties in the forward dressing station on the U. S. S. LEXINGTON when the blast came that caused his death."

Dr. Trojakowski was born in Schenectady, N. Y., in 1898. He attended school in that city until his enlistment in the Navy during the first World War. At the time he was 17 and a member of the senior class of Nott Terrace High School. Leaving the service, with the rating of Chief Pharmacist's Mate, to study dentistry, "Troj" graduated from the Baltimore College of Dental Surgery in 1923. For a year he practiced in New Britain, Conn. In July, 1924, he qualified by examination as lieutenant (junior grade) in the Dental Corps of the Navy. After being commissioned he studied at Columbia University. His first duty in service was in the Marine Barracks, Quantico, Va.

In 1929 Dr. Trojakowski was promoted to lieutenant senior grade. During this year he saw service with the Marine Expeditionary Brigade in Managua, Nicaragua. Returning to the United States in 1929, he was assigned to the U. S. Naval Hospital, Great Lakes. His next tour of duty was in the U. S. S. BEAVER; from that duty he was ordered to the Asiatic Station, where he served in Hankow, China. In 1937 he was the dental surgeon in the U. S. Naval Hospital, Brooklyn, where he was on duty at the time of his promotion to the rank of lieutenant commander in the Dental Corps. He made a sea cruise in the U. S. S. MISSISSIPPI in 1939. Two years later he was on shore duty in Puget Sound Navy Yard, Bremerton, Wash. From that station he was assigned to the LEXINGTON. In January, 1942, he was promoted to commander.

Commander Trojakowski was one of the outstanding members of the Navy Dental Corps and was held in high regard by the officers and men who were his shipmates in many stations in many parts of the world. Those of us who knew "Troj" in the old B. C. D. S. days recall him as a quiet, serious chap who made his own way through the four years of dental school. He was an exceptionally good student and a highly regarded member of Psi Omega fraternity. He is survived by his parents and several sisters and brothers; he never married.



WADSWORTH C. TROJAKOWSKI
1898-1942

MARYLAND ASSOCIATION HONORS DEAN ROBINSON

The congratulatory dinner given to J. Ben Robinson, President-Elect of the American Dental Association, during the Fifty-Ninth Annual Meeting of the Maryland State Dental Association, held in Baltimore May 4 and 5, was a notable occasion in the long history of that organization. The enthusiastic and loyal group of over four hundred dentists and their guests who attended the dinner paid impressive tribute to a member of the Association who will soon take over the challenging responsibilities of the A. D. A. presidency at the most critical time in the life of organized dentistry.

Earl W. Swinehart, a prominent figure in national and local affairs over a long period, was the toastmaster. The speakers were William E. Trail, President of the Maryland State Dental Association; H. Clifton Byrd, President of the University of Maryland; Edward J. Jennings, Trustee of the Fourth District; and Harlan Hoyt Horner, Secretary of the Council on Dental Education. They made eloquent acknowledgment of the highly important contributions of Dean Robinson to the profession in education, literature and organization.

An inspiring feature of the occasion was the presence of many representatives from the Army, the Navy and the Public Health Service: Brigadier General Robert H. Mills; Brigadier General Leigh C. Fairbank, retired; Captain Albert Knox, D.C., U. S. N.; Commander C. Raymond Wells, Selective Service System; Major Louis H. Renfrow, Selective Service System; and a score of dental officers from the military posts in the Maryland area.

THE COMMENCEMENT ACTIVITIES

ONE of the most interesting and certainly one of the best attended Commencements in the long history of the School was held on May 27, 28 and 29. The 1942 program undoubtedly marked the end of formal commencement exercises for the duration of the present conflict. The graduation and alumni activities of March, 1943, will be far different from those of the May days of 1942.

OMICRON KAPPA UPSILON

The Phi Chapter of Omicron Kappa Upsilon initiated the 1942 proceedings on May 27, with its annual convocation and banquet at the Lord Baltimore Hotel. The honorary member for 1942 was Commander C. Raymond Wells, D. C., U. S. Navy, who was presented by Dean J. Ben Robinson. The honored graduates of 1942 were presented for induction by Dr. George M. Anderson: Paul Deneroff, New York, N. Y.; Stewart Everson, Washington, D. C.; Samuel King, Mt. Nebo, W. Va.; Harold Schwartz, Belle Harbor, N. Y.; Joseph Tighe, Baltimore; Lewis Toomey, Elkridge, Md.; Donald Towson, Dundalk, Md.; and Riley Williamson, Baltimore.

Dr. Wesley Gewehr, the guest speaker, gave an unusually effective presentation of "The Background of the Second World War". Dr. Gewehr is professor of history at the University of Maryland, College Park. Miss Katharine Toomey, Administrative Assistant, was presented with a clock in commemoration of the twenty-fifth anniversary of her affiliation with the School. This occasion was the first of the several formal manifestations during Commencement of the high regard in which Miss Toomey is held by the

faculty, the students, and the Alumni of the B. C. D. S.

GOLF TOURNAMENT

Over twenty alumni participated in the annual tournament held at the Rolling Road Golf Club. Stuart G. Buppert '36, champion in 1937, won the cup again this year.

SENIOR CLASS BANQUET

The annual senior banquet and dance were held at the Emerson Hotel on May 28. The highlight of the evening was the presentation of a 1942 *Mirror* by the editor, Riley S. Williamson, to Miss Katharine Toomey. The book was dedicated to Miss Toomey in honor of her twenty-five years of loyal and highly estimable service to the School. Other guests of the class were Dean J. Ben Robinson, Dr. Myron S. Aisenberg, honorary president of the class, and Professor and Mrs. Gardner P. H. Foley.

THE SENIOR AWARDS

The annual series of contests was held at the School during the morning of May 29. The prizes, together with the several other medals and honors, were awarded at the Alumni banquet and dance held in the evening.

University Gold Medal for Scholarship: Riley Williamson, Baltimore.

Certificates of Honor: Riley Williamson (Magna Cum Laude), Baltimore; Donald Towson (Cum Laude), Dundalk, Md.; Stewart Everson, Washington, D. C.; Lewis Toomey, Elkridge, Md.; Samuel King, Mt. Nebo, W. Va.; Harold Schwartz, Belle Harbor, N. Y.

The Isaac H. Davis Memorial Medal for Cohesive Gold Filling (contributed by

Dr. Leonard I. Davis): Donald Towson, Dundalk, Md. Honorable Mention: Samuel King, Mt. Nebo, W. Va.

The Albert S. Loewenson Memorial Medal for Full Mouth Restoration (contributed by Mrs. Albert S. Loewenson): Donald Towson, Dundalk, Md. Honorable Mention: Victor Mintz, Newark, N. J.

The Alex H. Paterson Medal for Practical Set of Full Upper and Lower Dentures (contributed by Mrs. Alexander H. Paterson and Family): Riley Williamson, Baltimore. Honorable Mention: Harold Schwartz, Belle Harbor, N. Y.

The Harry E. Kelsey Award for Professional Demeanor (contributed by former associates of Dr. Kelsey: Drs. Anderson, Devlin, Hodges, and Preis): Joseph Tighe, Baltimore.

The National Alumni Medal for Thesis: Riley Williamson, Baltimore. Honorable Mention: Glenn Steele, Catonsville, Md.

Certificate of Merit for Outstanding Work in Practical Pedodontia (awarded by the American Society for Promotion of Dentistry for Children): Joseph Tighe, Baltimore.

The C. V. Mosby Co. Award: Arthur Herschaft, New York, N. Y.

Keys Awarded for Meritorious Work on the *Mirror*: Riley Williamson, Baltimore; Joseph Tighe, Baltimore; Alvin Savage, Baltimore; Rosalind Toubman, Hartford, Conn.

Captain W. A. Angwin presented letters to the seniors who had received Ensign Commissions: William Aldridge, Baltimore; Isador Katz, Ellenville, N. Y.; Norman Nathanson, Millis, Mass.; Julius Powell, Clinton, N. C.; Harold Schwartz, Belle Harbor, N. Y.; Glenn Steele, Catonsville, Md.; Chester Stoopack, Brooklyn, N. Y.; Howard Watsky, Mount Vernon, N. Y.; John Wieland, Baltimore.

ALUMNI MEETING

The principal business of the meeting was the election of officers for the 1942-3 year. The meeting was followed by a very pleasant luncheon at the University Hospital Dining Hall, an occasion which afforded good opportunity for fraternizing by the seniors, the faculty, and the alumni.

James H. Samuel, President, 55 Park Place, Morristown, N. J.

Gerald I. Brandon, First Vice-President, 3203 Garrison Boulevard, Baltimore.

Frank P. Duffy, Second Vice-President, 1 Bank Street, West Warwick, R. I.

Francis A. Sauer, Secretary, 4600 Park Heights Avenue, Baltimore.

Howard Van Natta, Treasurer, Medical Arts Building, Baltimore.

Harry Levin, Historian, 3429 Park Heights Avenue, Baltimore.

Dorsey R. Tipton, Editor, 5508 Edmondson Avenue, Catonsville, Md.

Executive Committee:

J. Stephenson Hopkins, Bel Air, Md., 1943.

C. Adam Bock, 806 Cathedral Street, Baltimore, 1943.

Albert C. Eskin, 1911 Eutaw Place, Baltimore, 1944.

Elmer F. Corey, 1901 E. 31st Street, Baltimore, 1944.

Myron Price, 2324 Eutaw Place, Baltimore, 1945.

George J. Phillips, Professional Building, Baltimore, 1945.

H. Hayward Streett, 829 Park Avenue, Baltimore, 1946.

Kyrle Preis, 700 Cathedral Street, Baltimore, 1946.

ALUMNI DINNER

The annual dinner of the Association was a corking good affair. B. Lucien Brun served as toastmaster and handled the large order of presentations in a color-

ful and capable manner. President H. Clifton Byrd spoke briefly, as did Clark Shaughnessy, new Director of Athletics at Maryland. Of course, the seniors had a prominent part in the many events of the occasion. But the guest of honor, Miss Katharine Toomey, Administrative Assistant of the School, shared honors with the senior class—Miss Toomey and the new alumni were the leading players in the splendid production expertly presented by the Alumni Association.

Timothy O. Heatwole, former Dean of the School, in whose administration Miss Toomey began her B. C. D. S. career in July, 1917, made the address of the evening. Dr. Heatwole epitomized the services of Miss Toomey to the School and to all the other phases of dental activity with which she has been affiliated, officially and unofficially. Miss Toomey received gifts from the senior class, the faculty, the alumni and the State Board of Examiners. Miss Toomey got what was becoming to her—fine gifts and golden words in commemoration of her Silver Anniversary.

CLASS REUNIONS

The five-year reunion classes from 1892 through 1937 made grand attendance showings at their dinners, held at various hotels in Baltimore on the night of May 28. The numerous chairmen, under the general direction of Dr. Myron S. Aisenberg, did amazingly good jobs in getting the boys back to Baltimore and in arranging gatherings that the homecoming veterans will long remember. The appended lists, supplied the JOURNAL by the numerous chairmen, afford excellent proof of the success of the reunions.

1892

(B. C. D. S.)

Fred A. Ford, Syracuse, N. Y.
W. C. Callahan, Johnstown, N. Y.

J. D. Whiteman, Mercer, Pa.
R. O. Sadler, Baltimore

(U. of Md.)

L. E. Hess, Baltimore

1897

(B. C. D. S.)

L. F. Palmer, Baltimore
N. Hoddes, Kew-Gardens, L. I.

1902

(U. of Md.)

B. B. Ide, Baltimore

1907

(B. C. D. S.)

Col. Frank Laflamme, Atlanta, Ga.
Stanley W. Webb, Baltimore

(U. of Md.)

H. Burton, Baltimore
Brig.-Gen. R. H. Mills, Washington,
D. C.

L. J. Robertson, Baltimore
A. B. Scarborough, Baltimore
A. Shpritz, Baltimore
R. F. Simmons, Norfolk, Va.
H. C. Smathers, Washington, D. C.
G. E. P. Truitt, Baltimore

1912

(B. C. D. S.)

A. Lankford, Baltimore
E. M. O'Brien, Mt. Ranier, Md.
H. D. Rhein, Harrisburg, Pa.
D. C. Ricketts, Point Pleasant, N. J.

1917

(U. of Md.)

M. Cramer, Baltimore
O. E. Culler, Baltimore
E. P. Dagon, Baltimore
F. J. Emerson, Baltimore

F. J. Manley, Baltimore
R. Smith, Towson, Md.

(B. C. D. S.)

A. J. Beausoleil, Pawtucket, R. I.
T. J. Bland, Jr., Baltimore
J. L. Carmony, Baltimore
L. A. Clarkson, Farmington, N. H.
M. A. Dorion, Somerville, Mass.
F. J. Houghton, Jersey City, N. J.
W. J. Hutchinson, Elizabeth, N. J.
E. B. Jackson, Baltimore
A. B. King, Baltimore
H. S. Morrisette, Norfolk, Va.
W. O. O'Conner, Jewett City, Conn.
W. H. Ricketts, Snow Hill, Md.
J. E. Tyler, Worcester, Mass.
L. A. Walzak, Kingston, Penn.

1922

(U. of Md.)

M. S. Aisenberg, Baltimore
John Clark, Baltimore
L. Emmart, Baltimore
G. W. Gaver, Baltimore
L. Grossman, Newark, N. J.
I. C. Kiell, Newark, N. J.
N. B. Scherr, Baltimore
D. E. Shehan, Baltimore
Morris Wolf, Washington, D. C.
Maynard Wolfe, Montclair, N. J.

1927

S. Abrams, Jersey City, N. J.
E. L. Baish, Baltimore
C. F. Bock, Baltimore
H. L. Bush, New York, N. Y.
S. H. Byer, Trenton, N. J.
M. E. Coberth, Baltimore
F. P. Donatelli, Allentown, Pa.
A. P. Doty, Plainfield, N. J.
J. W. Eagle, Keyser, W. Va.
A. B. Ellor, Bloomfield, N. J.
D. H. Erwin, Greensboro, N. C.
A. W. Fitch, New London, Conn.
J. P. Fitzgerald, Washington, D. C.

L. Fox, S. Norwalk, Conn.
S. R. Graffam, Baltimore
T. Grosby, Jersey City, N. J.
W. P. Hoffman, Washington, D. C.
A. Hundley, Jr., Baltimore
F. Hurst, Baltimore
J. M. Hyson, Baltimore
J. A. Jameson, Baltimore
R. J. King, Baltimore
W. Kirk, Port Deposit, Md.
I. H. Koppel, Baltimore
W. J. Lammers, Baltimore
P. L. McClain, Baltimore
L. M. Mielcarek, Chester, Pa.
C. A. Oneacre, New Martinsville, W. Va.
E. T. Prouty, St. Albans, Vt.
J. E. Quillen, Baltimore
P. A. Quirk, Jersey City, N. J.
A. W. Rauch, S. Orange, N. J.
C. P. Russell, Annapolis, Md.
J. Schwartz, Bloomfield, N. J.
J. A. Wierman, Dillsburg, Pa.

1932

I. Abramson, Baltimore
E. J. Ball, Paterson, N. J.
E. L. Bessette, Cranston, R. I.
C. E. Broadrup, Frederick, Md.
J. W. Coleman, Jersey City, N. J.
C. D. Dern, Taneytown, Md.
J. J. Englander, Bridgeport, Conn.
D. W. Farrington, Lowell, Mass.
D. R. Garrett, Ephrata, Pa.
J. D. Gitlin, New London, Conn.
B. Goodkin, Lincoln Park, N. J.
G. T. Grosshans, Bridgeport, Conn.
E. E. Hill, New Haven, Conn.
M. C. Hills, Wethersfield, Conn.
J. S. Kania, New Britain, Conn.
A. J. Kershaw, West Warwick, R. I.
N. Linder, Trenton, N. J.
J. E. Madden, Winchester, Va.
J. R. Manuel, Jr., Baltimore
J. H. Michael, Baltimore
L. F. Milliken, Annapolis, Md.
I. Newman, Union City, N. J.
R. Rosenbloom, Passaic, N. J.

A. Sidle, Glenburnie, Md.
 J. M. Steigelman, Baltimore
 A. E. Theodore, Baltimore
 J. L. Vajcovec, Webster, Mass.
 H. M. Weitzel, Shippensburg, Pa.
 R. M. Wilson, Raphine, Va.

1937

S. Barsky, Washington, D. C.
 C. M. Beetham, Merrick, N. Y.
 B. R. Berkowitz, Baltimore
 J. Byer, Pennington, N. J.
 W. R. Casey, Providence, R. I.
 A. T. Clewlow, Arbutus, Md.
 F. M. Edwards, Red Bank, N. J.
 J. A. Fulmer, Myrtle Beach, S. C.
 J. C. Heck, Baltimore
 P. T. Kanelos, Providence, R. I.

D. A. Levin, Baltimore
 G. Levitas, Westwood, N. J.
 B. M. Lewis, Roanoke, Va.
 M. S. Lubarsky, Philadelphia, Pa.
 R. G. Miller, Baltimore
 C. A. Nacrelli, Chester, Pa.
 B. L. Poster, Baltimore
 R. E. Richardson, Buena Vista, Va.
 F. J. Roh, Baltimore
 I. H. Rosen, Baltimore
 A. L. Seidler, Philadelphia, Pa.
 J. Shobin, Baltimore
 I. W. Sloan, Charleston, W. Va.
 E. L. Sidney, Baltimore
 G. Yoffe, Baltimore
 A. W. Zerdy, Saint Clair, Pa.
 Paul Deems (Honorary President)

PREDENTAL NODDINGS

Indignor quandoque bonus dormitat Homerus. (But if Homer, usually good, nods for a moment, I think it shame.)

Horace: *Ars Poetica*

These are selections from themes submitted to the English Department over a period of twelve years.

She is minding her baby under a tree near the bridal bath.

A flood in any part of the country can be brought right into your kitchen by pushing a button.

Dorothea has a saintly appearance and could think of nothing but internal life.

It is in the midst of the Jewish and Italian Ghetto. Here all races and sexes come to buy.

A wrong deed never accomplishes you anywhere.

Food was packed on three large tables and girls galore.

He steals money from the bank to investigate in stock.

This show exemplifies my tittle Money Verses Nature.

This thought of mine turned out to be just an over rating ambition that enters me just like an epidemic spreading over a country.

Continued on page 14

PARTIAL DENTURE IMPRESSIONS*

RILEY S. WILLIAMSON, D.D.S.

A PARTIAL denture may be infinitely valuable or definitely harmful to the patient, depending on how well it meets the requirements for the preservation of the patient's health, comfort, and esthetics. These requirements can be attained only by careful planning and execution of each step in the construction of the restoration. It cannot be said that any one part of the construction is the most important; since each step deserves the maximum of care. However, the procedure which forms the basic foundation of the entire construction of the denture is the impression.

Every impression material presents some advantages and disadvantages. To be ideal, it must meet the following requisites:

- 1—It must cause soft tissue compression when and where desired.
- 2—It must permit taking impressions of the soft tissues in repose when and where desired.
- 3—It must allow making tests in the mouth for stability and adaptation before the cast is made.
- 4—It must permit muscle-trimming.
- 5—It must allow for correcting or re-basing local areas without remaking the entire impression.
- 6—It must make an accurate recording of all surfaces of the teeth and soft tissues, including undercut areas.
- 7—It must allow the use of amalgam or low fusing alloy for reproducing the teeth on the cast.
- 8—It must not change volume during or after setting.
- 9—Its surface must not require the application of a staining or separating medium.
- 10—It must not be compressible.
- 11—It must permit boxing-in before making the cast.
- 12—It must permit removal from the mouth without distortion; and, if fractured, it must permit accurate reassembling of pieces.
- 13—It must not be harmful or particularly disagreeable to the patient during impression-taking.
- 14—Its use must not be confined to the expert prosthodontist; the average dentist must be able to use it.
- 15—It must be aseptic.
- 16—Its properties and reactions must be the same each time it is used.
- 17—It must harden or set at mouth temperature.
- 18—It must permit being introduced in the mouth at a moderately low temperature and must harden or set rapidly.
- 19—It must be economical.

There is, of course, no impression material at the present time that meets all of the above requisites. Thus, there is no single material that can be used universally.

BEESWAX, GUTTA-PERCHA

Although beeswax drags easily and does not adapt itself well at the periphery of the impression, it takes a fairly sharp impression; and it can be worked faster, with a minimum of serious distortion, than any other material. This fact, and its property of parting very easily from rough surfaces without cohesion, traction, or strains, make its use sometimes indi-

* An abridgement of the prize-winning thesis for May, 1942.

eated in taking impressions for certain surgical cases or fractures or for cases in which long and somewhat loose teeth have been left standing. It may also be used to rebase partial dentures with small saddles to obtain extra tissue compression in certain areas of a compound impression.

Gutta-percha may take a reasonably sharp impression which reproduces undercuts fairly accurately; however, it has the following disadvantages:

- 1—Lack of uniformity of composition and inconsistency of properties.
- 2—Tendency to give false impressions because of extreme resiliency and contraction at the edges of the impression tray.
- 3—Possibility of sticking to rough surfaces of teeth.

PLASTER OF PARIS

The advantages and disadvantages of any impression material can be determined by studying the manner in which it does or does not meet the requisites of of the so-called "ideal" impression material previously noted. The advantages of plaster of Paris in taking partial denture impressions are:

- 1—It permits taking impressions of the soft tissues in repose, when desired.
- 2—It makes an accurate recording of all surfaces of the teeth and soft tissues, including undercut areas.
- 3—It allows the use of amalgam or low-fusing alloy for reproducing the teeth on the cast, because of its rigidity and hardness.
- 4—It is not compressible, and therefore will not distort during the making of the cast.
- 5—It permits boxing-in before making the cast, and results in the formation of a neat, symmetrical cast.

6—It can be removed from the mouth without distortion, since it will fracture before it undergoes a change in shape.

7—It is aseptic, since it can be used only once.

8—Its use is not confined to the expert prosthodontist; the average practitioner can develop skill in its manipulation.

9—It will harden at mouth temperature.

10—It will permit being introduced into the mouth at a low temperature; and it can be made to set rapidly.

11—It is inexpensive.

On the other hand, plaster of Paris presents disadvantages as an impression material:

1—It will not cause soft tissue compression when used alone.

2—It is impractical to test the impression in the mouth for stability and adaptation before the cast is made.

3—It does not permit muscle-trimming at the saddle areas.

4—It does not permit ease of correcting or rebasing local areas without remaking the entire impression.

5—It changes volume during setting.

6—Its surface requires the application of a staining and separating medium, which has been shown to affect the accuracy of the cast.

7—While the material is not harmful to the patient, it is very disagreeable and often nauseating in spite of the use of flavoring material and the exercising of care to limit the excess of plaster in the pharyngeal area.

8—Its properties may not be the same every time it is mixed.

Apparently, the most important disadvantage of plaster of Paris is the fact that it will not cause compression of soft

tissues. This defect would seem to contraindicate its use for any partial denture deriving support from the soft tissues, that is, having one or more saddles not supported at both ends by abutment teeth. The advantageous properties of plaster make it very well suited to taking impressions for removable bridges deriving support solely from the roots of teeth, in which cases an impression of the soft tissue in repose is desired. It is also indicated for taking impressions of separate metal parts in the mouth, to be assembled later on the cast.

MODELING COMPOUND

The comparative inelasticity of modeling compound makes it impossible to copy undercuts when the impression is removed from the mouth in one piece. Therefore, such a technique for partial dentures is not within the realm of good dentistry; and it will not be considered. In this thesis, the good and bad properties of compound are considered only from the standpoint of its use in the sectional compound impression technique, as advocated by Kennedy.

Modeling compound has these advantages:

- 1—It will cause soft tissue compression when desired. In the absence of compression, the saddles of the denture will settle into the tissues whenever stress is placed on them; and they will spring back to their original position when the pressure is released. This lever action, with the abutment teeth as the fulcrum, will soon cause at least two disastrous results. The abutment teeth will be loosened, and the soft tissue and bone under the saddles will become resorbed because of these extremes in the

presence and absence of pressure upon them.

- 2—It allows making tests in the mouth for stability and adaptation before the cast is made. The various sections of the impression are necessarily easy to try in the mouth as often as desired, since they must be free of all undercut areas.
- 3—It permits muscle-trimming.
- 4—It allows for correcting or rebasing local areas without remaking the entire impression.
- 5—It permits the use of amalgam or low fusing metal for reproducing the teeth on the cast.
- 6—It does not change volume during or after setting.
- 7—Its surface does not require the application of a staining or separating medium.
- 8—It is not compressible.
- 9—It permits boxing-in before making the cast.
- 10—It permits removal from the mouth without distortion (only when used in the sectional technique).
- 11—It is not harmful or particularly disagreeable to the patient.
- 12—It is aseptic.
- 13—Its composition and properties are uniform if one brand of material is always used.
- 14—It is introduced in the mouth at a tolerable temperature; and it hardens rapidly at mouth temperature.
- 15—It is inexpensive.

The disadvantages of compound as an impression material for partial dentures are:

- 1—It does not permit taking impressions of the soft tissues in repose, when desired.

The fact that modeling compound does compress soft tissue

is a disadvantage only when taking impressions for dentures which derive their entire support from the abutment teeth.

- 2—It does not copy undercuts without distortion. Even in the sectional impression method, which was devised to overcome this defect, there will almost always be some slight distortion of the compound in certain undercut areas. However, this distortion is under the control and observation of the operator; and it may be remedied by paring the cast in undercut areas.

- 3—Its use in the sectional technique requires a maximum of skill and experience.

From the facts presented above, it is apparent that when used in the sectional impression technique, the modeling compound very nearly approaches the ideal impression material. The outstanding disadvantage in its use is the inability to take impressions of the soft tissues in repose. This is a disadvantage only when making the removable bridge type of partial denture which is supported only by the teeth. For practically all other types of partial dentures, compound can be successfully used.

HYDROCOLLOIDAL MATERIALS

From the standpoint of the requisites of an ideal impression material, the hydrocolloids show the following advantages as partial denture impression materials:

- 1—They permit taking impressions of the tissues in repose, when desired.
- 2—They accurately record all surfaces of the teeth and soft tissues, including undercuts, and can be removed in one piece.
- 3—They do not require the addition of a separating medium.

- 4—They are not harmful or particularly unpleasant to the patient.

- 5—Their use is not confined to the expert prosthodontist.

- 6—They are aseptic, especially since they must be immersed in boiling water before being used.

- 7—When one particular brand is used, its properties and reactions are the same for each sample.

- 8—They are used at a temperature tolerated by the mouth.

The disadvantageous properties of the hydrocolloids are:

- 1—They will not displace soft tissue. The only known ways of overcoming this disadvantage are various methods of taking a modeling compound impression of the compressible tissue and following the procedure with the hydrocolloid impression. These techniques are undoubtedly helpful. However, like the compound-plaster techniques, to serve adequately the purpose for which it is intended, the original compound impression requires a degree of skill and care similar to that required in the all-compound sectional technique. Thus, it is debatable whether the operator might do better to take the whole impression with sections of compound.

- 2—They do not permit making tests in the mouth for stability and adaptation before the cast is made.

- 3—They do not permit muscle-trimming.

- 4—They do not permit correcting or rebasing local areas without remaking the entire impression.

- 5—They do not permit the use of amalgam or a low fusing metal for reproducing the teeth on the cast.

- 6—They radically change volume if allowed to stand in the air before making the cast, and the surface of the material is liable to become etched if it is immersed in water for any length of time.
- 7—They are compressible.
- 8—They do not readily permit boxing-in of the impression before making the cast.
- 9—They set slowly in the mouth, except with the use of water-cooled trays, which are not adjustable to the mouth.
- 10—They are comparatively expensive.

Although the hydrocolloids are easy to manipulate, are pleasant to the patient, and will copy undercuts accurately, their disadvantages cannot be overlooked. They are very well suited for taking impressions for dentures deriving little or no support from the soft tissues, since they do not displace such tissue. If the operator cannot or will not become skillful in the all-compound sectional impression technique, hydrocolloids may be used fairly well for all other types of dentures. However, when judged by the manner in which they meet the requisites of an ideal impression material, the gels seem to be lacking in many of the necessary properties.

To take impressions for partial dentures

receiving complete or partial support from the soft tissues, the all-compound sectional impression technique is apparently the best. If compound is not used, the alternative might be either the combination compound-plaster or the compound-hydrocolloid. Plaster alone and hydrocolloid alone are the least favorable materials for these types.

For the type of partial denture that is supported solely by the teeth, either plaster alone or hydrocolloid alone will meet the requirements. The use of modeling compound alone is not indicated in this type of denture.

It is agreed that there are exceptions to the above conclusions. The facts presented are based on the average case presented to the dentist. Many cases will not lend themselves to standard methods; then, the operator must call upon his ingenuity.

There is one outstanding conclusion to be drawn here:

Since there is no single impression material that can be universally used for all types of partial dentures, it rests with the dentist to become proficient in the use of all standard materials, so that he can plan the impression-taking to fit the individual case, rather than learn the use of only one material and try to make all cases fit his technique.

PREDENTAL NODDINGS *(continued from page 9)*

With all her worldly-wise, it appears to me she can see no farther than her nose and give me an efficient pain in the neck.

He drifted from the streight and narrow after he was married by becomming a country doctor.

Man can think, think as no other animal can think, of course cunningness has to be excepted in supremacy for that goes into professionalism.

After a night spent of hard toil over books and papers the stuudent comes to school bleary eye and full of hope.

Continued on page 16

THE FRESHMAN CLASS

- Alvin D. Aisenberg, Baltimore, Washington and Lee
- Nathan P. Baker, Charleston, W. Va., University of West Virginia
- Joseph R. Beard, Cornelius, N. C., Erskine
- Arturo Benavent, Jr., (B.S.), San German, P. R., University of Maryland
- Fiore A. Bianchini, Corona, N. Y., Providence
- Norman V. Bianco (B.S.), North Adams, Mass., Villanova
- Ralph M. Bisaccia (A.B.), New Hartford, Conn., Yale
- Boyce A. Brawley (A.B.), Mooresville, N. C., University of North Carolina, Davidson
- Bernard L. Brown, Baltimore, University of Pennsylvania, University of Maryland
- Robert D. Burger (B.S.), Farmville, Va., Hampden-Sydney, Johns Hopkins
- John J. Cadden (A.B.), Baltimore, University of Maryland
- Vincent S. Cassaviell, New Brighton, N. Y., Villanova
- John J. Cicala, Edgewater, Md., University of Maryland
- Joseph M. Cohen, Freeport, N. Y., Lafayette
- Harry W. F. Dressel, Jr., Catonsville, Md., University of Maryland
- Albert M. Dunn, New Britain, Conn., University of Maryland
- Frederick P. Farris, Beckley, W. Va., Marshall
- Frederick H. Feindt, Baltimore, Loyola
- René E. Figueroa, Bogueron, P. R., Dayton, University of Puerto Rico
- Eugene E. Flesher, Towson, Md., University of Maryland
- George E. Fuller, Jr., Washington, D. C., Kemper Military
- Salvatore G. Gagliano (B.S.), Bronx, N. Y., Villanova
- Miguel A. García (B.S.), Hatillo, P. R., University of Puerto Rico
- Guido M. Gargani, Jr., Cranston, R. I., Providence
- Edwin A. Gendron, New Bedford, Mass., Holy Cross
- Robert A. George, Mt. Airy, N. C., University of North Carolina
- Rosario Gigliotti, New London, Conn., University of Maryland
- Henry Gillers, Washington, D. C., George Washington, University of Maryland
- Frank P. Gilley, Southwest Harbor, Me., University of Maine
- Michael L. Giuliano (A.B.), Mineola, N. Y., Tusculum
- Albert A. O. Grant, Dover, N. J., Upsala
- Martin A. Grossbart, Newark, N. J., Newark University, New York University
- Edward A. Issow, Port Chester, N. Y., Vanderbilt, University of Pennsylvania
- Alan Jackson, Forest Hills, N. Y., Queens, Brooklyn, Columbia
- Irving Jacobs (A.B.), Port Chester, N. Y., Vanderbilt, University of Maryland
- John F. M. Keighley, Jr., Providence, R. I., Washington and Lee, University of Maryland
- Gerald J. Klein (A.B.), Miami Beach, Fla., University of Florida
- Leonard Komros, Providence, R. I., Providence
- Charles M. Kramer, Brooklyn, N. Y., University of Alabama
- Walter I. Levine, Baltimore, University of Maryland
- Robert Long (A.B.), Statesville, N. C., Mitchell, University of North Carolina
- Leo M. Lotowycz, Jersey City, N. J., The Citadel, Lafayette
- Melvin Luxenberg, Brooklyn, N. Y., Brooklyn
- Matthew M. Macek, Manchester, N. H., Villanova, St. Anselm's
- John E. Markel, Baltimore, University of Maryland
- Bruce T. Mathias, Waynesboro, Pa., Lehigh, University of Maryland
- George J. Mazur, Bridgeport, Conn., University of Connecticut, University of Maryland
- Leon M. Mazzotta, Wildwood, N. J., University of Maryland
- John E. McWilliams, Baltimore, University of Maryland
- Harold Meinster, Baltimore, University of Maryland
- Ralph F. Menichino, Richmond Hill, N. Y., St. John's
- Robert F. Merriam, Baltimore, University of Maryland
- Charles F. Moore, Seaford, Del., University of Delaware
- Ernest F. Nardone, Westerly, R. I., Providence
- Seymour Neleber, Colchester, Conn., Clark
- Paul L. Noerr, Delta, Pa., University of Maryland
- Thaddeus J. Novicki, New Haven, Conn., Clark

- James W. O'Hearn, Pittsfield, Mass., University of Maryland, Colgate
 Stanley M. Oring, Elizabeth, N. J., Parsons
 Joseph J. Pitta, Brooklyn, N. Y., St. Francis
 Samuel Pruzansky, New York, N. Y., College of City of New York
 Allen Rekant (B.S.), Providence, R. I., Providence
 (Miss) Viola M. Rivera, Yauco, P. R., University of Puerto Rico
 Gerald J. Rose (B.S.), Suffolk, Va., William and Mary
 Abner T. Rowe, Jr., Washington, D. C., University of Maryland
 Ferdinand T. Serafini, Winsted, Conn., Providence
 Russell A. Smyth, Hingham, Mass., St. Lawrence, Loyola
 Richard B. Steele, Dagsboro, Del., University of Delaware, Roanoke
 Brendan R. Sullivan (B.S.), Nashua, N. H., Bluefield, Fordham
 Joseph P. Summa (B.S.), Waterbury, Conn., Holy Cross
 Bernard Totz, Baltimore, University of Maryland
 James L. Trone, Jr., Elkton, Md., University of Delaware
 Robert D. Voorhees, Manasquan, N. J., University of Maryland
 Philip A. Weber, Jr., (B.S.), Huntington, W. Va., Marshall
 Charles P. White, Morgantown, W. Va., University of West Virginia
 Bernard Wilkins, Mount Airy, Md., University of Maryland
 Louis Wiseman, Dover, N. Y., University of Maryland

PREDENTAL NODDINGS *(continued from page 14)*

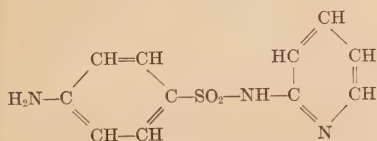
It is just one of those things, that one might notice as a wagon load of bananoes going by.
 Radio comes in hande in every faze of life.
 He arrived in New York with large population.
 The sences of "Blonde Captive" are set in the inferior of Australia.
 We walked the streets; we blew on our horns; and we drained ourselves with beer.
 The whole woods seem to have love in every part of the woods. The idea of these fairies struck me because I know there are no such things.
 She petitioned the aged home for admittance.
 Polonius was a treachous man who aided in the plot of getting Claudius on the throng.
 He seemed to be very shy and backwood.
 Tolstoy was a married and knew much about martial relations.
 The main talk at parties was so called small talks.
 He had always had a red and green light on the mast, this was suppose to be able to tell the ship.
 The monument of Francis Scot Key who wrote the Stars Spangel Banner during the fight between the English and the Colonies is also in Baltimore.
 Accidents are unfrequented occurances.

Continued on page 20

CHEMOTHERAPY WITH SULFAPYRIDINE

HERBERT S. FINE (JUNIOR CLASS)

CREDIT for the synthesis of the drug used in the treatment of approximately 18,000 cases of pneumonia during the winter of 1938-1939 goes to Dr. A. J. Ewins and Mr. A. Phillips of the chemical research laboratories of May and Baker, Ltd., at Dagenham, England. The synthesis of this drug was the result of long and tedious experiments to find a drug that would be specific against the pneumococcus and yet possess a chemotherapeutic index favorable enough to justify its use clinically. The chemical formula as established by Ewins and Phillips is shown below.



The drug in the pure state is a white crystalline powder with a melting point of from 190.5 to 191.5 degrees Centigrade. It is closely related both chemically and physically to its parent substance, sulfanilamide. At 37.5 degrees C. it is soluble in water to the extent of 28 mg. per 100 cc. This is about one-thirtieth the solubility of the parent substance.

The statistics available on the clinical use of sulfapyridine in the treatment of pneumonia have been accumulated for a period of years with infinite patience and with a view to finding out a number of associated facts, such as the relationship of the use of the drug to bacteriemic and non-bacteriemic cases, the relationship to the type of pneumococcus concerned, and the relationship to complicating diseases.

As yet, the final results of the use of the drug have not been fully tabulated nor are they thoroughly understood. It is beyond the scope of this brief paper to state the results obtained in these many trials. A typical report that appeared in the February, 1939, issue of the *Journal of the American Medical Association* discusses 100 cases of pneumonia treated with sulfapyridine. In this series only cases in which the pneumococci were able to be typed in either the sputum or the blood were used. There were 4 deaths, 3 of which were from infections of the Type III pneumococcus. This study also included 8 cases of bacteriemia, of which only one was fatal.

Another report submitted recently includes a study of 200 pneumonia patients.⁷ Only 100 of these were treated with sulfapyridine; in the group of 100 treated with sulfapyridine, there were 8 deaths; whereas in the alternate 100 cases who received the usual course of treatment there were 27 deaths. It is of importance to add that in this series the cases were selected to establish parallel conditions in every way; that is, in regard to severity, complications, duration of disease at the time of admission, sex, age, general health of the patient, etc. Further, it was noted that in those patients under sulfapyridine therapy, the course of the disease was shortened by an average of three to four days.

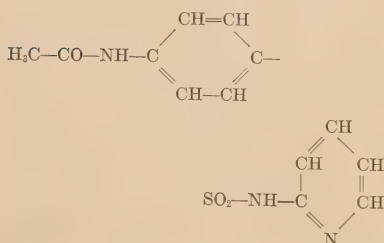
In February, 1939, sulfapyridine was given intravenously for the first time.⁷ Intravenous administration was found to enhance the clinical usage of the drug. Up until that time, the drug had been given only orally. Using this method, the Johns Hopkins Hospital reported the lowest fatality rate of its history in the

treatment of pneumonia.⁷ This rate was reported as 7.2 per cent.

The toxic manifestations of sulfapyridine are far less severe than those of the parent substance, sulfanilamide, with the exceptions of nausea and vomiting. There are reports claiming that sulfapyridine is responsible for renal calculi; other reports have associated it with hepatitis with jaundice, hemolytic anemia, toxic excitement, agranulocytosis, and severe leucopenia which disappeared with the removal of the drug.

PHARMACOLOGY OF SULFAPYRIDINE

The absorption of sulfapyridine from the gastro-intestinal tract is fairly rapid. Shortly after the administration of the drug, it may be quite easily detected in the blood by a simple test that transforms the drug into a colored dye substance which can be easily compared with pure samples of sulfapyridine. *It is of interest to the dental profession to note that the much used drug procaine often disguises a true sulfapyridine reading by combination with the dye substance to produce a deep red precipitate.* After absorption into the body, the fate of sulfapyridine is the same as the general fate of the aromatic compounds with a free para-amino group. The main changes are wrought in the liver. Acetylation is the most common change and this renders the compound less active. The resultant product has the formula:



The free and conjugated derivatives are found in the blood, the body fluids and the urine. They have also been reported in the spinal fluid.

Following oral administration of the drug, the blood range is usually from 3 to 6 milligram per cent. Higher concentrations have been reported in children and infants. The blood level of sulfapyridine is considerably lower than that of sulfanilamide.

The drug is excreted almost wholly by the kidneys. The rate of excretion is not so great as with sulfanilamide, and the reports as to the time required for complete excretion are conflicting. Several authors have reported complete excretion in just one day; but others have assigned three or four days for the complete excretion.

STUDIES OF THE TOXIC REACTIONS

The importance of the toxic reactions of the sulfapyridine drug cannot be over-emphasized. They must be carefully considered by the physician and ought to be borne in mind continually during the entire course of treatment. Among the most easily observed effects of the administration of the drug are nausea and vomiting. These effects were formerly believed to be due to the irritation of the gastric mucosa by the drug. Later, however, the drug was found to produce the same effects even when administered parenterally. All indications at present seem to point to the fact that the vomiting reaction is due to some direct effect on the central nervous system.

Some patients under treatment with sulfapyridine have developed skin rashes similar to those developed in patients receiving sulfanilamide. There are indications that photosensitivity increases the severity of the reaction with both drugs; therefore it has been suggested that pa-

tients suffering from these rashes be removed from all strong sunlight.

Another of the toxic symptoms that are generally not very marked is cyanosis, which is never as serious as that developed in the sulfanilamide cases. Forms of toxic hepatitis and jaundice have been reported, but all of these appear rarely.

Fever due to the administration of the drug has been more thoroughly investigated than most of the other toxic symptoms. In these cases a rise in temperature without a change in the white blood cell count is the feature indicative of a drug fever. Drug fever is almost always obscured by the usually existent fever of the pneumonia patients and by the tendency of the drug to reduce the prevailing fever almost immediately. The cause of drug fever is not well understood, and may be associated with allergies, pharmacological reaction and body resistance.

Disturbances to the central nervous system following the use of sulfapyridine have been extensively reported. These include the common headache, malaise, depression, vertigo, and, in very severe cases, what might be termed toxic psychosis. This latter condition was observed in some four per cent of 2000 cases treated by the oral methods of administration. These mental conditions are variable in the time of their appearance and in their severity. It may be said that generally these conditions disappear when the drug is removed. Some authors also have observed a marked reduction in the state of mental alertness because of the drug.

By far the most important of the toxic reactions of the drug are the so-called severe toxic symptoms, which include neutropenia and acute hemolytic anemia. It is of the utmost importance that a daily blood count and hemoglobin determina-

tion of the patient be taken to detect these changes.

The condition known as *agranulocytopenia* usually progresses quite rapidly and is *always* sufficient reason to stop the use of the drug.

The *acute hemolytic anemia* following the use of sulfapyridine is relatively frequent in occurrence and can be controlled by transfusions. In certain cases in which the acute hemolytic anemia is not too severe and there is a marked necessity for the continued use of the drug, transfusions are resorted to and the use is continued. In a report on 3000 pneumonia cases, 89 showed some degree of anemia, while the incidence of neutropenia was relatively slight.⁵ The type of anemia encountered may be a decrease in the R.B.C. count or a decrease in hemoglobin percentage of the blood. Again it should be stated that it is of the utmost importance that the blood be checked very frequently.

Another one of the toxic reactions of sulfapyridine which at present is receiving very much attention is the renal involvement resulting from the drug. Several authors have reported the formations of calculi in the entire urinary tract following its use.⁶ The calculi were made up almost entirely of acetylsulfapyridine. Experimentally, it has been shown that the oral administration of the sodium salt of the drug is more effective in the formation of uroliths than the drug itself. Other sources have reported hematuria during the use of the drug; still others indicate that children are, as a whole, far more susceptible to renal complications than are adults.⁷ The incidence of hematuria in 2300 cases of pneumococcic pneumonia was reported quite recently as 0.8 per cent. As a measure to prevent renal complications, patients are being advised to increase their fluid intake during the course of the treatment.

Sodium bicarbonate has been used in order to alkalinize the urine thereby increasing the solubility of the acetyl-sulfapyridine.

Thus far, the therapeutic values of sulfapyridine have not been fully investigated. The number of diseases in which its use is being tried is continually increasing. In spite of its recentness, amazing results have been obtained with its usage, but the time for determining accurately its full pathological and physiological effect lies probably ten or fifteen years ahead.

BIBLIOGRAPHY

1. ANTOPOL, W.: Occurrence of urologic complications in humans following sulfapyridine therapy. *J. Urol.*, 43: 589-597 (April) 1940.
2. BROOKS, C.: Toxic effects of sulfanilamide and sulfapyridine. *New Orleans M. Surg. J.*, 82: 115-118 (September) 1939.
3. BRYCE, D. A., AND CLIMENKO, D. R.: Sulfapyridine in pneumonia. *J. A. M. A.*, 112: 1182 (March 5) 1939.
4. CURRENT COMMENT: Effect of sulfapyridine on the urinary tract. *J. A. M. A.*, 112: 1834 (May 6) 1939.
5. DOLGOROL, V. B., AND HOBART, H. M.: Granulocytopenia in sulfapyridine therapy. *J. A. M. A.*, 113: 1012 (September 9) 1939.
6. TOOMEY, J. A.: Urinary concretions and sulfapyridine. *J. A. M. A.*, 113: 250-251 (July 15) 1939.
7. The Clinical Use of Sulfapyridine in Pneumococcal Pneumonia. Merck and Company, Inc.

PREDENTAL NODDINGS (*continued from page 16*)

The cornerstone was laid in 1923 and cost approximately five million dollars.

They marry, Emmy again influenced by the piano, and have a child.

As man is a friendly creature he has formed Fraternities and what not in order to, in a modern way, enjoy the thrills of the pioneer days.

A noun or pronoun linked with a gerund should take possessive case. Dicken's does not do this.

The story is mostly friction.

He was a pompous fellow because he ate and ate when he sat down to any table.

Elmer Granty, a strong well build young man, is one that will always try to subdue a woman.

The birth, reproduction and death of many different animals are the actual property of Mr. Beebe.

The Chesapeake bay is the home of the brave and the land of the free.

The girls dress was very untidy giving the resemblance that a man had dressed her.

As night came upon us, we were no longer able to see very well, so we decided to call it day.

They have no bathrooms because schools is only eight weeks long.

One scene in particular stood out particular to me.

It was a diversion from the daily chores on the farm.

INCIDENT AT NATCHEZ: 1828*

SOL SMITH

MOST of the company of Mr. Caldwell had assembled at Natchez [fall of 1828], nearly a week before the theatre opened. Time hanging rather heavily on their hands, they set to amusing themselves as well as they could. There was a Mr. Tooley in the town, a justice of the peace, a member of the church, and a violent opposer of the theatre. On the previous season he had connived at the escape of a negro thief, merely because he committed the felony in the theatre—telling the sufferer (who was no other man than myself) that he was served rightly, and it was a pity he had not lost everything he possessed, so that he would thus be prevented following his criminal profession! Among the new engagements this season was a Mr. Carr, a kind of “rough-shod” vocalist—a cockney Jew, who could bellow out “Oft in the still night” like a clap of thunder, and warble “Wha’ll be king but Charlie?” like a bull. We learned that this vocalist had been a dentist, and he had communicated his attention of singing and drawing teeth in the western metropolis on his arrival there—in short, he expected to charm the lovers of harmony with his vocal powers, and line his pockets by the exercise of his dental acquirements. These two persons were the ones chosen by the lovers of mirth as the *Dram. Personae*, for the joke which was to make the time pass lightly for at least a day.

In due time, Dr. Carr received the following note:

* From *Anecdotal Recollections of Sol. Smith*, Philadelphia (c. 1845). Sol. Smith, the famous comedian of the old Southwest, was one of the most colorful figures in the history of the American Stage.

“Natchez, Nov. 28, 1828.

“Sir:—For some years our town has been visited by quacks, who have passed themselves off for dentists, imposing on the people and pocketing their money without rendering them any essential service.

“My wife has for a very long time been in need of having a very difficult operation performed on her teeth and jaws, which I have been unwilling to employ any of the numerous pretenders who have visited this place to do, hoping that some gentleman would arrive with whom she might be intrusted with safety. I have been told by a friend from Philadelphia that you stood very high in that city as a professor of dentistry, and the object of this note is to request that you will favor me with your company to dinner at half-past one o’clock, bringing your instruments; and I assure you I will make it worth your while to perform the operation required, as money is no object to me in comparison with Mrs. Tooley’s comfort.

“Your having adopted the theatrical profession is an additional inducement with me to employ you, as I am always glad to have it in my power to benefit those engaged in it, considering it as I do, the noblest profession on earth. Your complying with this request may be beneficial to you in more ways than one. Be punctual at half-past one.

“Yours respectfully,

“J. TOOLEY.”

When this letter was handed to Carr by a negro boy, he was enraptured. Several of us *happened* to be present; he immediately excused himself to us, and saying he had an appointment, he began to prepare for his visit. He had swallowed the bait, hook and all. A few minutes before the time appointed, the performers (by mere accident) again happened to be strolling along the street which led to the justice’s house. Punctual to his time, Dr. Carr was seen bustling along, with a miniature chest of drawers under his arm, and dressed up in the finest manner. Every one asked him to stop, on some pretence or other. All

we could get out of him was, that he " 'ad a werry himportant haffair hon 'is 'ands, and 'e vas hafraid of being too late."

Precisely at the time appointed, he knocked at the justice's door. A servant inquired his business. "Tell the squire that Dr. Carr vishes to see him." "The squire is just sitting down to dinner." "Yes, I know it—please to deliver my message." In a few minutes the servant returned, and asked him to walk in.

The doctor accordingly stepped into the dining-room, bowing and scraping. After the usual salutations, the justice inquired his business. "I'm Doctor Carr." "Ah! Dr. Carr, how do you do? Well, Dr. Carr, how can I serve you?" "I am Dr. Carr, from Philadelphia, you know." "Well, Doctor, to what am I indebted for this visit?" "Vy, you know I 'ave come to see you, I've brought my

hinstruments." "Brought your instruments?" "Yes—I belongs to the theatre, you know—I've brought my hinstruments—I'm going to dine with you, and then I'm going to hoperate on your vife."

At these words the justice seized a chair, and, raising it over the poor doctor's head, exclaimed—"You infernal playactor! If you don't instantly leave my house, I'll perform an operation on your head!" As he was about to suit the action to word, the doctor, in utter surprise, made a precipitate retreat, roaring murder! At the street-door his foot slipped, and he fell headlong down the steps, his hinstruments flying in every direction.

On being questioned in the evening about his "appointment," poor Carr, with an exceedingly chop-fallen countenance, replied, "That 'ere hinvitation, and the 'ole concern vas a wile 'oax!"

The Accelerated Course

Because of the already serious shortage of dentists and the ever-increasing need for dental services by the civilian population and by all the branches of the government service, most of the dental schools have made drastic changes in their calendars. Following the recommendation of the Council on Dental Education of the American Dental Association, our School has adapted its entire educational program to the demands created by the emergency and has instituted a continuous teaching schedule that will enable students to receive their training and to enter professional practice at the earliest possible time. During the period of acceleration, classes will be admitted every eight months, beginning with the June class of 1942 that is now well into its first year. Classes will be graduated approximately thirty-six months after the date of first registration. The present senior class will be graduated about March 10, 1943.

ALUMNI NEWS

ALPHA OMEGA ALUMNI

THE graduate chapter wound up its program for the year with Dr. Louis Kaplan, well known lecturer, as its guest speaker. During the summer months, meetings are not held and little business is accomplished. However, the local chapter completed its share in the national Alpha Omega contribution of two dental ambulances to the United States Army Dental Corps.

During the past month, three more of our boys have answered their country's call and have donned Uncle Sam's finery.

SIGMA EPSILON DELTA ALUMNI

The Maryland Graduate Chapter on April 29, 1942, held its first annual home talent night, when members of the Graduate Chapter presented clinics for the benefit of the undergraduates. The following men gave clinics: Dr. Arthur Britowitch, Acrylics for Restorative Dentistry; Dr. Irving Abramson, Indirect Inlay Technique Using Hydrocolloid for Impression Material; Dr. Myron Sachs, Pneumatic Condensation of Amalgams; Dr. A. Bernard Eskow, Equilibration of Occlusion; Dr. Daniel Berman, Oral Pathology; and Dr. Henry E. Rostov, Direct Pattern Technique for the Three-quarter Crown.

We are proud of the fact that so many of our men are serving in the armed forces of the United States or have applied for commissions. The men already in service comprise about one-third of our membership: Dr. Albert Eskin, Dr. Samuel Hanik, Dr. Leon Meinster, Dr. Murray Storch, Dr. Frederick Rudo, Dr. Jerome Cullen, Dr. Bernard Auerbach, Dr. Gary Troupp and Dr. Myron Sachs.

We closed the year in our customary manner by entertaining at a stag affair the S.E.D. men of the graduating class.

THE WOMEN OF PSI OMEGA

Instead of holding the regular business meeting on the fourth Monday of April, all the women and their husbands met at the fraternity house on Sunday, April 26, for supper. Each couple contributed some favorite dish for the party. No one except the hostess, Mrs. Dave Danforth, knew what the other members were bringing. The party was a happy get-together for all our active members and a grand time for the husbands, too.

The first fall meeting will be held in October.

XI PSI PHI ALUMNI

The Maryland State Alumni Chapter had a successful Fall and Winter program. The Chapter held meetings at the Zip House on the third Tuesday of each month. After a short business meeting, the evenings were devoted to entertainment and refreshments. The turnouts were good and everyone had a pleasant time.

The last monthly meeting of the Alumni Chapter was "Ladies' Nite." A musical was held at the home of Dr. and Mrs. Frederick Smyth; the program arrangements were made by Doctors Frederick and Lawrence Smyth. A very pleasant evening of entertainment was enjoyed by the members.

The Alumni Chapter salutes its members serving in the Armed Forces of the United States and wishes them an early return.

All Zips are invited when in Baltimore to visit the Xi Psi Phi home at 1829 Bolton Street.

XI PSI PHI WOMEN'S CLUB

The members of the Women's Club closed a very successful season with their

May meeting. A card party, held at the fraternity house on April 11, proved a pleasant and successful event. At the joint meeting of the ladies' and men's groups at the home of Dr. and Mrs. F. F. Smyth on April 21, members of the Club entertained with a playlet, readings and music. The evening was so enjoyable to all present that more meetings of this type are planned for the Fall. The dinner-dance held at the Emerson Hotel on May 16 was well attended by our group. The monthly business meetings, followed by Mrs. Brownell's luncheons, have been grand get-togethers. Although the next regular meeting is not until October, the Club will keep active during the summer by informal meetings and be ready to help the boys in any way during their accelerated course.

PERSONALS

Dr. Edmund Louis Bohne '41 married Mildred Harvell Thompson, M.D., on April 11, 1942.

Dr. Vaiden Blankenship Kendrick '32 married Frances Elizabeth Pearson on March 26, 1942.

Lt. Erwin Edward Shea '39 married Patricia Madeline Connor on March 21, 1942.

Dr. Bertrand O. Chan-Pong '39 married Annie Hochoy on April 18, 1942.

Dr. Jason Russell Lewis '42 married Margaret Paula Thalheimer on June 14, 1942.

Dr. Sterrett Patterson Beaven '41 married Doris May Lusemihl on June 6, 1942.

Dr. Earle Harris Watson '42 married Dorothy Winifred Fankhanel on May 30, 1942.

Dr. Riley Seth Williamson '42 married Doreen Mehrmann Seitz on June 13, 1942.

Dr. Roger E. Williams, '42 married Virginia Lee Ridenour on June 6, 1942.

Dr. John Thomas Wieland '42 married Mary Elizabeth Smith June 10, 1942.

Lt. Jerome S. Cullen '41 married Carmen Rosenberg on June 21, 1942.

Lieut. (j.g.) V. Randolph Hawkins '41 married Eleanor Schnepfe on June 30, 1942.

Dr. and Mrs. Vernon D. Kaufman '36 announce the birth of a daughter, Dianne Barbara, on May 25, 1942.

Dr. and Mrs. Frank A. Lasley, Jr., '38 announce the birth of a son, Frank A. Lasley, III, on June 29, 1942.

Dr. and Mrs. Eugene L. Pessagno, Jr., '40 announce the birth of a daughter, Margaret Ann, on July 15, 1942.

Dr. and Mrs. Elmer L. Sydney '37 announce the birth of a daughter, Sarita Rochelle, on June 24, 1942.

OBITUARY

Dr. Max B. Dunn (U. of Md. 1918) of New Britain, Conn., died March 29, 1942. Among Dr. Dunn's survivors are a brother, Dr. Morris Dunn (U. of Md. 1914), and a son, Albert, who is a member of the freshman class at the B. C. D. S.

Dr. John J. Kersey (B. C. D. S. 1915) of Seymour, Conn., died April 30, 1942.

Dr. Justus H. Ehlers (B. M. C. 1898) of Preston, Md., died June 5, 1942.

Dr. S. Lua Syckes (B. C. D. S. 1896) of Cumberland, Md., died March 29, 1942.

Dr. Jose A. Davila (U. of Md. 1915) of Baltimore died May 19, 1942.

Dr. Joseph Calton Biddix, Sr., (B. C. D. S. 1908) of Baltimore died June 28, 1942.

STUDENT ACTIVITIES

FRESHMAN CLASS

UNLIKE the freshman classes of former years that convened on cool autumn days after a long, restful summer, this year's freshman class met in the sweltering heat of a Baltimore summer. The new arrangement is due to the accelerated course in effect for the duration. The four-year course has been telescoped to three by the elimination of the summer vacations. The courses are the same except that the student has no opportunity to recuperate after each session.

After taking one glance at *Gray's Anatomy* most of us were ready to swallow the "gas" that is handed out by the upperclassmen. Naturally, those students who have taken their predental courses at this institution are immune to "gas." One of those illustrious gentlemen, Mr. Dunn, is trying his best to convince his new acquaintances that anatomy is just so much "stuff."

Not all of the members are inexperienced fledgelings, for we have among us John Cadden and Robert Burger, who have taught in high schools. At the conclusion of the next three trying years there are sure to be many wrinkled faces and hairless heads, but we are confident that when we have finished, the Army and Navy will have some dentists who are in the groove.

President: Boyce A. Brawley, Moorestown, N. C.

Vice-president: Stanley M. Oring, Elizabeth, N. J.

Secretary: Albert A. O. Grant, Dover, N. J.

Treasurer: Bernard L. Brown, Baltimore

Sergeant-at-arms: Matthew M. Macek, Manchester, N. H.

Historian: Irving Jacobs, Port Chester, N. Y.

SOPHOMORE CLASS

No longer do we hear the old familiar phrase "Remember our Freshman Year?" echoing throughout the sophomore lecture and laboratory rooms. Instead, we hear "Remember Pearl Harbor!" We certainly do remember Pearl Harbor and for many reasons. We remember it primarily for its challenge to our country, and secondly for its effect on our own daily routines. This summer we find ourselves attending classes instead of relaxing after a hard year of studies. But even that isn't too bad because the new fans in our lecture halls compensate for the heat.

Many of our classmates have found it necessary to work at every opportune hour in order that they may continue with their studies. As a result one can find representatives from our class working in many of Baltimore's department stores and shops.

We find, too, that this year the membership of our class has been reduced from its original 98 students to 87. However, a new member, Eugene Aserinsky, has been added. Many of the men and women who left our company have returned, determined that this time they will conquer the freshman "Dragon."

The armed forces have afforded us an opportunity to become reserve officers until we complete our studies. Most of us have already enlisted in order to take advantage of this chance to attain the status of students in the service of our country.

President: D. G. Fales, Baltimore

Vice-president: H. R. Bullitt, Trenton, N. J.

Secretary: W. E. Pfeifer, Halethorpe, Md.

Treasurer: E. Moskowitz, Bridgeport, Conn.

Sergeant-at-arms: N. F. Smith, Baltimore

Historian: H. Goldberg, Westfield, N. J.

Student Representative: E. L. Inman, Baltimore

Treasurer: George Richman, New Britain, Conn.

Sergeant-at-arms: Philip Zeender, Winsted, Conn.

Class Representative: Mahlon Leiphart, Hellam, Pa.

Historian: Carl Shpiner, Newark, N. J.

SENIOR CLASS

If we are the Class of '43 what are we going to do about our present inferiors, the juniors who will also graduate in 1943? How shall we classify those guys—1943 B, 1943', 1943 (Emergency), 1943 (secondary), 1943 (as of 1944)? Or shall we recommend that the School graduate them in the fall and then forget about them? Thus they will be graduates in a unique class—the Forgotten Class that knows no description, that claims no affiliation. H. S. Levy is the chairman of the committee that will handle this challenging problem. Levy expects to have it solved by Christmas, 1943—being a specialist in classification.

ALPHA OMEGA, ZETA MU CHAPTER

As the wind-up to last year, Alpha Omega held its annual Spring Formal at the Belvedere Hotel. The affair was unusually successful despite the note of sadness in the farewell to the graduates. On returning in June the group was delighted to find the house resplendent with new paint and wallpaper in all the rooms and new leather furniture in the living-room.

Rushing proceeded as usual with the arrival of the new freshmen. On June 30 we held our smoker, which was an impressive occasion for both members and guests. On the following Thursday thirteen freshmen were present for the pledge ritual: Alvin Aisenberg, Md., Bernard Brown, Md., Albert Dunn, Conn.; Henry Gillers, D. C.; Martin

JUNIOR CLASS

On becoming juniors we realize that we are taking a major step in our dental careers. Heretofore, we have prepared cavities in endoform and extracted teeth and have made bridges and other restorations for inanimate endoform jaws. Now we are confronted with the intricate problems of the human dentition and our technical procedures must be modified to overcome the varied pathologic conditions that the human mouth presents.

Because of the emergency it has become necessary for us to continue school throughout the summer months. Not having had previous clinical experience we cannot judge the effect that the accelerated program has upon our clinical work, although we have noticed and felt the definite shortage of patients due to increased civilian defense activities.

When we enrolled as freshmen in September, 1940, Ed Biczak was the only married member of our class. Since then four more of our classmates have relinquished their bachelor's rating. Weiselberg took the step on June 21, 1941; Lipman on March 19, Gibson on May 25 and Beerbower on June 7, of this year.

President: Robert Smith, Harrington, Del.

Vice-president: Harold Hyman, Meriden, Conn.

Secretary: August Machen, Baltimore

Grossbart, N. J.; Edward Issow, N. Y.; Irving Jacobs, N. Y.; Gerald Klein, Fla.; George Mazur, Conn.; Stanley Oring, N. J.; Allen Rekant, R. I.; Bernard Wilkins, Md.; Louis Wiseman, N. H.

Despite the short vacation and the heat of summer the boys returned overflowing with ambition, the result of which is a new "Redwood Bar" in the club room. Should the ambition continue, this should prove to be a highly successful year.

SIGMA EPSILON DELTA

Sigma Epsilon Delta began the accelerated school year with enthusiastic house improvements; also athletic, social, and academic activities.

The house was repainted, bedroom and living furniture was purchased, and the appearance of our living quarters and game rooms has been greatly improved. Since liquid refreshment is always in order at summer social functions we also decided to install a bar to facilitate the dispensing of such refreshment—(milk and lemonade, of course!). We are now searching for a shiny brass rail to give the bar that final authentic touch.

Athletic activities have been limited so far to weekly excursions to the popular swimming-holes around town. However, a few of the boys have been vigorously sharpening up their golf and tennis strokes in preparation for a proposed interfraternity tournament in both these sports. We believe that S. E. D. has a softball combination capable of victory over any other team representing a dental school fraternity, and we are willing to back up that claim any Sunday at Druid Hill Park. Who will accept the challenge?

The highlight of the social season so far has been the annual Smoker. The big events of the season are still to come:

the Induction Dance, the Pledge Dance and the Farewell Dance. We look forward with keen anticipation to these events; in the meantime our weekly Saturday night dances are being enjoyed by all.

In the field of education our men have also been active. Various clinics have been and are being held for the Freshmen in order to help them over the stumbling blocks encountered in any new field. Our Speakers Committee is arranging a program which will measure up to the high standards set by our predecessors.

Master: Mortimer L. Rosenfeld, Bronx, N. Y.

Chaplain: Robert T. Shilkret, New York, N. Y.

Scribe: William R. Bisgeier, East Orange, N. J.

Treasurer: Stanley Auerbach, Brooklyn, N. Y.

Historian: Lester Langel, New York, N. Y.

Inner Guard: Fred J. Witzburg, Newark, N. J.

Outer Guard: Daniel Hurowitz, Brooklyn, N. Y.

PSI OMEGA, ALPHA CHAPTER

The spring of '42 witnessed many activities of great significance in the history of the fraternity. One of the most outstanding events was the Fiftieth Anniversary banquet, held at the Merchants Club on April 17. When this affair was first planned, it was to have been a conclave of all active and alumni chapters. However, the present emergency thwarted such plans and instead of one Baltimore celebration numerous banquets were held throughout the country to commemorate the Golden Anniversary of Psi Omega.

Yes, war certainly has done things! It changed the time. It stepped up pro-

duction. It brought on rationing. It even brought on an "Accelerated Plan of Instruction." We tried to forget our usual activities of the summer. With grim determination we began our routine in the middle of June.

Under the superb leadership of Jack Bryce, our Grand Master, together with the cooperation of the active members, this first year of the "Accelerated Plan" should be a very pleasant and successful eight months.

We join with hundreds of alumni and students in praise of Miss Katharine Toomey at the time of the twenty-fifth anniversary of her loyal service to the School. We all hope she may guide many more classes through the four

years of their preparation in her devoted and efficient manner.

XI PSI PHI, ETA CHAPTER

There is much studying to be done, but we plan to have a few "Vic" parties and perhaps a day at the beach to alleviate the intensity of our arduous schedules. Dentistry, war, and keeping-cool seem to be the chief topics of conversation.

The chapter will continue its usual routine of meetings, clinics, and monthly get-togethers during the summer semester. We intend to keep "on the ball," for we realize that there is much important work to be done. Our house has been decorated with summer furnishings and it really looks great.

WANTED: INSTRUMENT CASES

If you were graduated after 1930 and still have in your possession the wood or steel instrument case you used for your clinical operative instruments, and wish to sell this case, please fill in the form below and send at once to the Dental School.

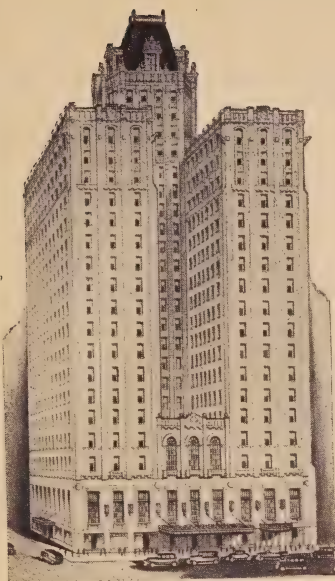
I have an instrument case in fair
 good condition.
 excellent

It is of wood
 steel construction. I will sell it for \$.....

.....
(Signature)

.....
(Year of Graduation)

.....
(Address)



Always

"AT YOUR SERVICE"

It's only natural but it's mighty gratifying . . . that, whenever a smart Baltimorean has need of the facilities or service of a great hotel, he thinks of the city's newest and largest the Lord Baltimore. 700 exceptionally comfortable rooms, superb cuisine and a location unequalled for business or pleasure, have a great deal to do with this natural preference.

Try it yourself!



LORD BALTIMORE HOTEL

Dentistry in the News

Last December the lowers of a Montanan's denture saved his life. They deflected a bullet accidentally fired by a .22-caliber rifle.

Early in August an Illinois candidate for the Naval Air Corps was rejected by an examining dentist. The lad returned two hours later with six new fillings and a vacant socket. He passed.

In June a man in Los Angeles filed suit for \$16,250 damages involving the loss of one tooth. The plaintiff claimed he suffered the loss while grinding his teeth in a strenuous attempt to check his temper from exploding after an automobile collision.

On August 6 two prominent Havana dentists settled with sabers an affair of professional honor. They emerged without serious wounds, conciliated. Dr. Coro, dean of the dental school at Havana University, had objected to criticism of his administration made by Dr. Varona, editor of a dental journal.

Recently a dentist wrote to the *New York Times* that he had cut in half the rubber mat encircling his operating chair. He contributed the twenty-five pounds to the rubber drive.

THE
LUTHER B. BENTON COMPANY

BALTIMORE'S MOST MODERN DENTAL DEPOT

709-11 N. Howard Street

(established 1856)



WE STOCK A COMPLETE LINE
OF EQUIPMENT AND SUPPLIES



Why not call
"Benton's"
Vernon 8512-3-4

FRANK W. TAYLOR
College Representative

S. S. WHITE CEMENTS

Fulfill all dental requirements

THEY ARE STRONG ★ "ADHESIVE" ★ DURABLE

* ZINC CEMENT IMPROVED

For cementing inlays, single crowns, crown and bridgework, orthodontic bands; for dressing seals, liners, steps or bases, under amalgam fillings and inlays; for permanent fillings in deciduous teeth and temporary fillings in permanent teeth.

4 colors



* SILVER CEMENT IMPROVED

Anodyne, self-limiting, germicidal

For cementing gold crowns and inlays, and for steps, liners, or bases in posterior teeth; also for temporary fillings in permanent teeth. Contains 2% silver phosphate. Its gray color darkens when exposed to light.



* RED COPPER CEMENT

Contains 25% red copper oxide. While its germicidal property is not so potent as that of Silver Cement, the red copper oxide is more penetrating.



KRYPTEX

A translucent cementing and filling material

Kryptex is recommended especially for cementing ceramic pieces—porcelain inlays, facings, crowns, and for cementing gold restorations. It is also used widely for simple fillings in permanent teeth when marginal support is present.

Kryptex is harder and stronger than the oxyphosphate cements. Whatever is cemented with it "stays put."

6 colors



GERMICIDAL KRYPTEX

Contains 0.2% mercurammonium chloride. Its germicidal potency is greater than that of the silver and copper cements. Recommended particularly for cementing orthodontic bands, also for filling food retentive and defective sulci in deciduous teeth; for fillings in six year molars; for cementing gold crowns, inlays and bridgework in posterior locations. It darkens when exposed to light.



*COMPLY WITH A.D.A. SPECIFICATION NO. 8, FIRST REVISION

For Sale by Your Local Dealer

THE S. S. WHITE DENTAL MFG. CO.

PHILADELPHIA, PA.

(In writing to advertisers, please mention the journal—it helps.)

“Serving The Profession Since 1896.”

CHARLES R. DEELEY & SON DENTAL SUPPLY COMPANY

“The house of tomorrow—at your service today.”

Showing the most complete
line of Dental Equipment in
our display rooms, we extend
an invitation to you to visit
our depot at any time.

For real service, just call Ver-
non 1820 or Vernon 4054

DEELEY DENTAL SERVICE

108 W. Mulberry St.

Baltimore, Maryland

Our Unselfish Goal . . .

YOUR EXCLUSIVE PATRONAGE

Our many years in the dental supply business have been happy ones—happy because we have enjoyed the confidence of practitioners everywhere. They have helped us and we have helped them—working together has proved mutually advantageous.

We want to earn *your* confidence too. Won't you give us the opportunity to prove that the type of dental supply service we are in a position to offer will be invaluable to you in your practice? We are confident of earning *your* exclusive patronage.

You are protected in all of your dealings with our reputable depot. All merchandise is fully guaranteed and the prices are right.

THE L. D. CAULK COMPANY

(Hart & Stoetzer)

BALTIMORE, MD.

<i>Depots in</i> PHILADELPHIA, PA.	CHICAGO, ILL.	OAKLAND, CAL.
PITTSBURGH, PA.	HUNTINGTON, W. VA.	SAN FRANCISCO, CAL.
NEWARK, N. J.	WHEELING, W. VA.	HARRISBURG, PA.



THE Journal

OF THE
BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND



MESSAGE TO THE ALUMNI	1
DEDICATION OF SERVICE MEMORIAL	2
HUGH R. ALEXANDER '19	4
GILBERT F. GORSUCH '39	5
HERBERT FRIEDBERG '37	5
ALUMNI HONOR ROLL	6
MARCH 1943 COMMENCEMENT	19
THE ASSISTANCE OF THE DENTIST IN THE FIELD OF PLAS- TIC AND RECONSTRUCTIVE SURGERY	21
PREFACE AT FORT MEADE	28
HYPOPLASIA OF HUMAN ENAMEL	30
STUDENT ACTIVITIES	35
ROBERT L. MITCHELL	39
ALUMNI NEWS	40

BALTIMORE
DENTAL SURGERY

VOLUME 8

December, 1943

NUMBER 1

THE *Journal*

OF THE

BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND

VOL. 8

No. 1

EDITORIAL STAFF

Editor

GARDNER P. H. FOLEY

Alumni Editor

DORSEY R. TIPTON

Business Manager

B. A. DABROWSKI

Advisory Board

GEORGE M. ANDERSON

BURT B. IDE

J. BEN ROBINSON

Student Staff

W. E. PFEIFER, JR., Junior, Chairman

H. S. FINE, Senior

H. A. RADLER, Junior

R. H. SMITH, Senior

R. GIGLIOTTI, Sophomore

J. E. MARKEL, Sophomore

J. G. BARRY, Freshman

The Journal of the Baltimore College of Dental Surgery is published irregularly by the Faculty, the Students and the National Alumni Association of the Baltimore College of Dental Surgery, Dental School, University of Maryland; and the Grieves Library Foundation of the Maryland State Dental Association.

Made in United States of America

Message to the Alumni

THE Honor Roll of our graduates now enlisted in the armed forces of their country indicates the splendid response of the sons of the B.C.D.S. to the call of the Army and Navy for dentists to serve the needs of the millions of Americans who are in training camps and on battlefronts all over the world. At this publication date (January 5) the Honor Roll contains the names of 445 Alumni. With the addition of the roster of the November graduates now in training for active duty assignments in the near future, the Roll will list well over 500 of our men.

The B.C.D.S. has made a remarkable record, unique in the annals of dentistry, by its contribution of graduates to the positions of contemporary leadership in the profession. J. Ben Robinson '14, President of the American Dental Association 1942-1943, guided the profession through the most trying year in its history. The leadership of Dean Robinson was and will continue to be an inspiring and important force in the various activities of the profession. The highest ranking dental officers in the Army, the Navy and in the Public Health Service are graduates of the B.C.D.S.: Major General Robert H. Mills '07; Rear Admiral Alexander G. Lyle '12; and William T. Wright, Jr., Assistant Surgeon General (Dental), U.S.P.H.S. These four men have contributed greatly to the participation of dentistry in all phases of the war effort, both civilian and military.

Your Alumni Association has continued to function during the years of our country's participation in the great war that influences all phases of our professional activities. Although some phases of our usual programs have been curtailed or eliminated for the duration, the officers of the Association have continued to sponsor the annual alumni meetings and dinners. Under the circumstances these affairs have been very well conducted and attended.

Fraternally,
JAMES H. SAMUEL, '14, President
National Alumni Association
Baltimore College of Dental Surgery
Dental School, University of Maryland



DEDICATION OF SERVICE MEMORIAL

DEDICATION ADDRESS BY DEAN ROBINSON

THE program thus far this evening has been devoted to the recognition of the achievements of those who are about to leave us. We desire now to devote our thoughts to those who have been called from their accustomed places among us in the practice of their profession.

The Faculty of the College has on numerous occasions discussed the desirability of recognizing in some appropriate manner the very large number of graduates of our School who have entered the services of their country. Agreeable to this purpose the Faculty planned what it regards as a proper testimonial in recognition of the splendid sacrifices of those of our alumni who have chosen the military life as their vocations and also of that much larger group of our men who have patriotically surrendered their places in civilian life to assume positions in the great military struggle in which our country is now engaged. The Faculty sought diligently and earnestly to show in a more effective manner than may be expressed in mere words, its deep appreciation of the sacrifices made by the nearly 600 graduates of the B.C.D.S. who have entered the services and who are stationed throughout the United States and in all theatres of operations on the many battle fronts. Some of our Alumni are serving their country in a direct health service capacity; others of conspicuous ability have been called as leaders in positions of high distinction.

To those in the South Pacific, in North Africa, in the British Isles, in Iceland, in Alaska and on the home front we acknowledge our debt. While the great majority of these have closed the doors of their offices temporarily, they have opened the doors to a higher service of which they will always be proud, as will their friends, their families and their Alma Mater. Their contribution to the preservation of our American way of life and our cherished liberties will always hold a place high in the esteem of the College that gave them professional birth.

It is with solemn feeling that we voice our regret that this testimonial cannot be devoted exclusively as a service flag. Of necessity it must also be a memorial tablet. Such is the penalty of war. Let us hope and pray that the supreme sacrifice made by our Alumni dead may not be in vain, and that from these and other such sacrifices, a better and more peaceful world may ensue. Let us pay solemn homage to those sons of the School who have given their lives in the service of their country.



HUGH R. ALEXANDER

Lieutenant Commander Hugh Rossman Alexander, D.C., U.S. Navy, the first graduate of our School to die in this war, was killed in line of duty on the U.S.S. *Oklahoma* when the Japs attacked Pearl Harbor on December 7, 1941.*

During the first World War Dr. Alexander interrupted his student career at the University of Maryland to enlist in the Navy. He served on the U.S.S. *Martha Washington*, engaged in convoy duty in 1918. Returning to the University for his senior year, "Al" was the "only man in school who was privileged to wear the gold service stripe on his sleeve." Quiet and unassuming, he was held in high esteem by the students and the faculty and was an outstanding member of the Class of 1919.

* Alexander's death was reported after the JOURNAL had cited Commander Trojakowski, who was killed in the Battle of the Coral Sea, as the first son of the B.C.D.S. to give his life in this war.

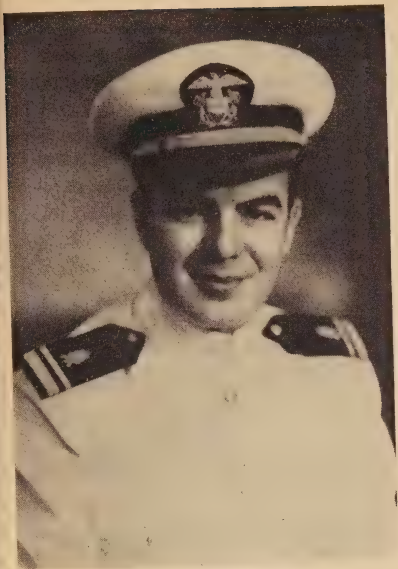
Carrying out his ambition to be a Navy dentist, Dr. Alexander was commissioned in May, 1920 as a lieutenant (junior grade) in the Navy Dental Corps and assigned to duty in the Naval Training Station, Hampton Roads, Virginia. His first active duty assignment at sea was the U.S.S. *Henderson*, a naval transport. During his long and varied career in the Navy, Hugh Alexander served on foreign duty and in many types of ships. He was commissioned lieutenant commander in January 1930.

Friends of Alexander who were in Honolulu at the time of the Pearl Harbor attack have written that "Hugh helped 16 men to safety by pushing them out of the port-hole of the compartment in which they found themselves trapped when the ship was on fire."

Surviving Lieutenant Commander Alexander are his wife, Theresa, and daughter, Gloria, who reside at Coronado, Calif.; and two brothers, Lowell H. and Elmer A. Alexander, of Belleville, Pa.

Lt. Gorsuch, D.C., U.S.N., of the Class of 1939, was killed in action on November 12, 1942; his ship, the U.S.S. *Erie*, was engaged with a Japanese naval force. Dr. Gorsuch is the third of our Navy men to lose his life in the service of his country, and the first of the Navy Reserve list. The name of Gorsuch is on the Memorial Tablet with the names of Alexander and Trojakowski, gallant veterans of long service in the Navy.

Dr. Gorsuch graduated from the Sparrows Point, Md., High School. He prepared for the Dental School by taking the pre-dental course then offered in Baltimore by the University of Maryland. He was a member of Psi Omega fraternity. Following his graduation in June, 1939, he practiced for a year and a half in Rockville and in Pocomoke City, Md. He was married in 1940 to the former Miss Grace Scull, who survives him. Dr. Gorsuch



GILBERT F. GORSUCH

entered the Navy as a reserve officer in 1941; he received his promotion to Lieutenant (senior grade) shortly before he met his death on the *Erie*.

Lt. Herbert Friedberg, D.C., A.U.S., was born in Philadelphia on August 29, 1914; he was killed on Attu Island on May 29, 1943—the first Army man of the B.C.D.S. to die in this war.

Dr. Friedberg came to the B.C.D.S. from Atlantic City, N.J. He attended the predental course at the Dental School and graduated from the professional course in 1937. As one of the outstanding members of Alpha Omega fraternity he was chosen by his brothers to serve them as Macer, Scribe and Chancellor. His classmates elected him as Treasurer during his sophomore, junior and senior years. He was a member of the Gorgas Odontological Society.

Lt. Friedberg interned at the Beth

Israel Hospital in Newark; he then attended the Northwestern Dental School, where he took a postgraduate course in Oral Surgery and Exodontia. He began private practice in Atlantic City. Entering the Army Dental Corps in August, 1942, he was sent to Camp Sutton, N.C. He was transferred to Fort Ord, Cal., where he was attached to the 302nd Ordnance Battalion. His last assignment was to the Seventh Medical Battalion, Armed Landing Force.

An eyewitness account of Lt. Friedberg's death on Attu reports that he was a member of the Field Hospital that was attacked by about 200 Japs who killed a dental officer (Friedberg), a medical officer, five corps men and several patients. Lt. Friedberg was sleeping in his sleeping bag at the time of the attack and was shot and bayoneted.

Lt. Friedberg is survived by his wife, the former Mitzie Salit, and a son, Barry.



HERBERT FRIEDBERG

HONOR ROLL OF ALUMNI IN ACTIVE SERVICE

1907

Col. Frank L. K. LaFlamme, DC, Moore
General Hospital, Swannanoa, North
Carolina.

Brig. Gen. Robert H. Mills, Surgeon
General's Office, Medical Department,
U.S.A., Washington, D. C.

1909

Capt. C. Constantine, DC, Station Hos-
pital, Camp Hulen, Texas.

1910

Lt. Col. Page P. A. Chesser, DC, Camp
Edwards, Massachusetts.

1911

Colonel Daniel Bratton, DC, Camp Den-
tal Surgeon, Fort Meade, Maryland.

1912

Rear Admiral Alexander Gordon Lyle,
DC, Naval Air Station, Quonset Point,
Rhode Island.

1913

Major Howard E. Topping, DC, 18th
Hospital Center, Camp Atterbury,
Indiana.

1914

Lt. Col. John H. Frederick, DC, Dental
Clinic, Headquarters, 3rd Service Com-
mand, Post Office Building, Baltimore,
Maryland.

Lt. Col. Norval H. McDonald, DC, 135
Engineers, A.P.O. 869, c/o Postmaster,
New York City.

Col. Thomas L. Spoon, DC, Camp Dental
Surgeon, Station Hospital, Camp But-
ner, North Carolina.

William T. Wright, Jr., Sr. Dental Sur-
geon, Chief of Dental Section, U. S.

Public Health Service, Washington,
D. C.

1915

Major Cayetano R. Pou (Gomez), A.P.O.
846, c/o Postmaster, New York City.
Major Louis Ruiz Soler, A.P.O. 846, c/o
Postmaster, New York City.

1916

Maj. Francisco Veray Marin, A.P.O. 846,
c/o Postmaster, New York City.

1917

Maj. Edgar J. Jacques, DC, Fort Banks,
Massachusetts.

Lt. Col. Frederick S. Maier, DC, Dental
Clinic, Station Hospital, Fort Dix, New
Jersey.

1918

Com. Louis V. Hayes, DC, USNR, U. S.
Naval Dental Clinic, Navy Yard,
Brooklyn, New York.

Lt. Com. A. A. Sussman, MC, U.S.N.,
Norfolk Naval Yard, Portsmouth, Vir-
ginia.

1922

Lt. Col. Federico Dimas Aruto, A.P.O.
846, c/o Postmaster, New York City.

Capt. Louis J. Berdon, DC, New Station
Hospital, Fort Devens, Massachusetts.

Major C. Adam Bock, DC, General Hos-
pital 18, A.P.O. 913, c/o Postmaster,
San Francisco, California.

Capt. Louis B. Grossman, Dental Clinic,
#23 C.A. (B) T. C., Newmarket,
Ontario, Canada.

Capt. Percy Lightman, DC, Station
Hospital, Camp Stewart, Georgia.

Capt. Myron I. Price, 1326 Service Unit,
Camp Lee, Virginia.

Lt. J. B. Silverman, DC, Army Air Base, Dyersburg, Tennessee.

Lt. Alexander J. Spinner, DC, Station Hospital, Indiantown Gap, M.R., Pennsylvania.

Capt. Raymond B. Yeaton, DC, 40th Signal Const. Bn., Camp Campbell, Clarksville, Tennessee.

1923

Capt. H. P. Beerman, Spanish Apartments, 16 Davis Boulevard, Tampa, Florida.

Capt. Edwin K. Devine, AC., B.T.C., #5 A.A.F.T.T.C., Kearn's Field, Utah.

Commander Hector J. A. MacInnis.

Lt. W. A. Pressly, Kessler Field, Biloxi, Mississippi.

1924

Lt. Com. R. D. Campbell, U. S. S. Alcor, c/o Postmaster, New York City.

Lt. Com. Herbert M. Jones, Gulf Shipbuilding Corp., Supt. of Ships Office, U. S. Navy, Chickasaw, Alabama.

Lt. Wilson L. Miller, DC, USNR, U. S. Navy Yard, Dental Clinic, 193 Park Ave., Brooklyn, New York.

1925

Lt. Charles H. Bruce, Orangeburg Group, Camp Kilmer, New Brunswick, New Jersey.

Capt. Demetrio Crespo Cardona, A.P.O. 846, c/o Postmaster, New York City.

Major Euripides Cosimi, DC, A.P.O. 848, c/o Postmaster, New York City.

Major Jacob D. Fisher, DC, Fort Eustis, Virginia.

Lt. Edward J. Jerdon, DC, USNR, U.S.S. *Joseph T. Dickman*, Fleet Post-office, New York City.

Capt. George F. McEvoy, DC, Dental Clinic, Walter Reed General Hospital, Washington, D.C.

Lt. Kenmore E. Merriam, Camp Peary, Ship's Co., Williamsburg, Virginia.

Com. Arthur Siegel, U. S. Naval Training Station, Bainbridge, Maryland.

Lt. Robert B. Towill, Dental X, N. O. B., N.T.S., Norfolk, Virginia.

Capt. H. H. Weisengreen, 40th General Hospital, N.O.S.A., New Orleans, Louisiana.

1926

Major W. L. Badger, Station Hospital, Camp Pickett, Virginia.

Lt. Com. Robert E. Blair, U. S. Navy Yard, Brooklyn, New York.

Lt. A. S. Bumgarner, U. S. Navy.

Lt. Com. Joseph D. Fusco, DC, New Naval Hospital, N. O. B., Norfolk, Virginia.

Lt. J. H. Klock, DC, USNR, Naval Air Station, Jacksonville, Florida.

Lt. David Monk, DC, 278525, 6th General Hospital, U. D. F. M. E., c/o A.P.O., Durban, South Africa.

Lt. R. M. Phreaner, DC, U.S.A., Fort Meade, Maryland.

Capt. Ben P. Sandy, Central Dental Laboratory, Fort McPherson, Georgia.

Lt. Nicholas A. Sharp, Moore General Hospital, Swannanoa, North Carolina.

Capt. Wallace P. Smith, DC, Red River Ord. Depot, Texarkana, Texas.

Major J. P. Spellman, DC, Cantonment Hospital, Fort Meade, Maryland.

Major Robert D. Walker, DC, 104th Cavalry, Thackeray & O'Hara Street Armory, Pittsburgh, Pennsylvania.

1927

Lt. E. L. Baish, DC, 4th Convalescent Hosp., Fort McPherson, Atlanta, Georgia.

Major Brice M. Dorsey, DC, 0-403451, General Hospital 42, A.P.O. 1142, c/o Postmaster, San Francisco, California.

Lt. J. W. Eagle, Station Hospital, Ship's Company, Camp Peary, Williamsburg, Virginia.

Major James J. Holdstock, Jr., DC 0-257064, 7th Station Hospital, A.P.O. 320, c/o Postmaster, New York City.

Lt. Alwyn Hundley, Jr., DC, USNR, U.S.S. *Chaumont*, c/o Fleet Post Office, San Francisco, California.

Lt. Ralph L. Huth, DC, USNR, S.S.A. White Poppy, c/o Postmaster, San Francisco, California.

Maj. James Marrone, 0-295506, 135th Engineer Reg. C., A.P.O. 869, c/o Postmaster, New York City.

Major C. Newberg, DC, 39th General Hospital, A.P.O. 3284, c/o Postmaster, San Francisco, California.

Lt. L. R. Schilling, Receiving Station No. 2, N.O.B., Norfolk, Virginia.

R. R. Shoaf, Medical Field Service School, Carlisle Barracks, Pennsylvania.

Major J. Paul Winthrop, DC, 8th Evacuation Hospital, A.P.O. 758, c/o Postmaster, New York City.

1928

Major Irving J. Aronson, DC, Dental Clinic, Station Hospital, Fort Dix, New Jersey.

Capt. Sidney H. Blumberg, DC, Apt. #45, 27 Johnson Avenue, Newark, New Jersey.

Capt. J. William Faucette, DC, 121st Station Hospital, Camp Barkeley, Texas.

Lt. William M. Goldberg, DC, Dispensary S.A., Sect. 1—C.P.E., Charleston, South Carolina.

Capt. Bernard Kniberg, DC, Camp Ritchie, Maryland.

George A. Uihlein, Dental Clinic 2, Station Hospital, Camp Edwards, Massachusetts.

Lt. Clement A. Zerdesky, 1580th Service Unit, Camp Campbell, Kentucky.

1929

Capt. A. Dudley Drake, DC, 85th Division, Artillery Division Medical Det., Camp Shelby, Hattiesburg, Mississippi.

Lt. M. C. Fancher, DC, Station Hospital, Pine Camp, New York.

Lt. R. D. Grace, DC, 120th Station Hospital, Camp Barkeley, Texas.

Lt. Com. Herbert H. Greenberg, Navy 157, Fleet Postoffice, New York City.

Lt. Paul Q. Ohslund, Apt. 65-D, Fort Devens, Massachusetts.

Lt. Francis W. Phillips, Newport Training Station, Coddington Point, Newport, Rhode Island.

Lt. Elwood W. Seeley, DC, 556th Signal A.W. Bn., A.P.O. 860, c/o Postmaster, New York City.

Capt. Robert G. Springer, DC, Dental Clinic, Station Hospital, Fort Dix, New Jersey.

Capt. Nelson John Thomas, Base Hospital, Eglin Field, Florida.

Lt. Herman Weisler, DC, Fort Hamilton, New York.

Lt. Sheldon L. Wolf, DC, A.A.F.T.T.C., Station Hospital, Miami Beach, Florida.

1930

Lt. Albert Lapow, DC, Overseas.

Lt. John F. Maguire, Base Hospital, A.A.C., Miami, Florida.

Capt. Michael B. Messore, 0-315475, Station Hospital, Hunter Field, Savannah, Ga.

1931

Lt. Jacob R. Cohen, DC, Surgery Department, Station Hospital, Camp Lee, Virginia.

Capt. C. Landis Curry, DC, Station Hospital, Carlisle Barracks, Pennsylvania.

Major Albert C. Eskin, 5th Aux. Surgical Hospital, Fort Houston, San Antonio, Texas.

Major Max B. Friedman, DC, Station Hospital, Jackson Army Air Base, Jackson, Mississippi.

Major Edgar Gunther, DC, 0-20085, Hq. Force 9465, A.P.O. 715, c/o Postmaster, San Francisco, California.

Lt. Russell P. Kiker, Naval Training Station, Norfolk, Virginia.

Lt. Max Niernberg, DC, Fort Wright, Connecticut.

Lt. Clarence E. Saunders, 0-312889, Army Air Base, Medical Det., A.P.O. 966, c/o Postmaster, San Francisco, California.

1932

Major Samuel H. Bryant, DC, 0-401570, General Hospital 142, A.P.O. 913, c/o Postmaster, San Francisco, California.

Carroll D. Dern, U. S. Public Health, Marine Hospital, Buffalo, New York.

Lt. Raymond J. Graves, U. S. S. Seattle, Pier 92, New York City.

Major Hammond L. Johnston, DC, 0-407421, General Hospital 118, A.P.O. 927, c/o Postmaster, San Francisco, California.

Lt. Ward B. Jones, DC, Fort Meade, Maryland.

Maj. Vaiden B. Kendrick, 0-415628, A.P.O. 511, c/o Postmaster, New York City.

Capt. Harry W. Lyons, DC, Station Hospital, Fort Adams, Rhode Island.

J. Robert Manuel, Jr., U. S. Public Health Service.

Lt. (j. g.) John H. Michael, Naval Training Station, Dental Unit X, N.O.B., Norfolk, Virginia.

Lt. Lyman F. Milliken, DC, Carlisle Barracks, Pennsylvania.

Lt. R. B. Prather, Naval Training Station, Newport, Rhode Island.

Lt. Benjamin L. Rosen, Norfolk Naval Operating Base, Dental X, N.O.B., Norfolk, Virginia.

Capt. Reuben Rosenbloom, Hq. 22 Q.M. Reg. (Trk.), A.P.O. 668, c/o Postmaster, New York City.

Lt. Leon Seligman, Air Officers Training School, Miami, Florida.

Lt. (j. g.) Alfred E. Theodore, U. S. Coast Guard, Fort McHenry, Maryland.

Capt. Georges O. Vezina, 0-309255, Div. Dental Surgeon, Hdq. 43rd Division, A.P.O. 43, c/o Postmaster, San Francisco, California.

1933

Lt. Philip L. Block, DC, Air Force Basic Training Center, Kessler Field, Mississippi.

Lt. (j. g.) W. Burton Chesterfield.

Lt. Morton J. Goldiner, DC.

Lt. Lewis Goldstein, Station Hospital, Camp Stewart, Georgia.

Lt. Charles B. Gorsuch, 0-522883, N.Y.P.E., Brooklyn, New York.

Lt. H. H. Hall, U.S.N.R., U. S. S. *Barnett*, Fleet Post Office, San Francisco, California.

Lt. Nathaniel L. Helfmann, DC, Fort Eustis, Virginia.

Capt. Paul W. Holter, DC, Station Hospital, Fort Benjamin Harrison, Ind.

Lt. Robert N. Hunt, DC, 0-1693032, 431st Sig. Bn. Cons. Avn., A.P.O. 650, c/o Postmaster, New York City.

Lt. Irving Kaplan, DC.

Lt. Walter J. Kowalski, DC, Station Hospital, Fort Dix, New Jersey.

Lt. George Krasnow, DC, 314th Engr. Bn., 89th Inf. Div., Camp Carson, Colorado.

Lt. Alexander Levine, 402nd Coast Artillery (AA), Portsmouth, Virginia.

Lt. Com. Daryl S. McClung, DC, U. S. S. *Relief*, c/o Postmaster, New York City.

- Lt. Warren McKay, DC, Station Hospital, Fort Eustis, Virginia.
- Lt. Allen J. Reed, DC, U.S.A.A.F., Scott Field, Illinois.
- Lt. Clarence J. Rodgers, 747th Tank Bn., Camp Hood, Texas.
- Lt. Jerome E. Schreiber, Camp MacPherson, Georgia.
- Capt. Joseph Shulman, 0-474542, 315 Troop Carrier Group, A.P.O. 3300, c/o Postmaster, New York City.
- Capt. Irving Steinfeld, 86th Div., 343rd. Inf. Med. Detachment, Camp Howze, Texas.
- Lt. Harold F. Waldman, DC, Fort Meade, Maryland.
- George E. Wheeler, USNR.
- Lt. Aaron Pargot, DC, USNR., N.O.B. Dental Clinic, Unit A, Norfolk, Va.
- Lt. Joseph F. Pichacolas, DC, Station Hospital, Med. Det. Army Air Base, Salt Lake City, Utah.
- Lt. William Schunick, DC, 556th Signal A. W. Bn., A.P.O. 860, c/o Postmaster, New York City.
- Lt. Howard G. Taylor, Dental Unit X, N.O.B., Norfolk, Virginia.
- Lt. Marvin R. Thomas, DC, 1318th S.U., Station Hospital, Camp Pickett, Virginia.
- Lt. Fred A. Turner, Dental Corps, Hotel Suwannee, St. Petersburg, Florida.
- Lt. Abraham Yablon, DC, Camp Holabird, Baltimore, Maryland.

1934

- Lt. G. Harry Aumock, DC, 111th Inf. C.T., New Bern, North Carolina.
- Lt. Myron S. Baker, 1342 Service Unit, Holabird Ordnance Base, Holabird, Maryland.
- Lt. (j. g.) J. C. Biddix, United States Public Health Service.
- Capt. Douglas A. Browning, DC, 0-403383, General Hospital 142, A.P.O. 913, c/o Postmaster, San Francisco, California.
- Lt. Sylvan Caplan, Med. Det. 149th Inf. Reg., A.P.O. 38th Div., c/o Leesville, La.
- Lt. Raymond Gillespie, DC, A.U.S., Walter Reed General Hospital, Washington, D. C.
- Lt. Philip Gorenberg, U. S. Navy.
- Lt. William R. Joule, DC, Fort Dix, New Jersey.
- Lt. Walter H. Kwiecien, DC, Dental Clinic, Station Hospital, Fort Dix, New Jersey.
- Lt. Robert Rettie McLean, DC, Station Hospital (Det. Service), Fort Oglethorpe, Georgia.
- Lt. Com. James Maisel, DC, Naval Air Station, Cape May, New Jersey.

1935

- Lt. Philip Warren Anderson, U. S. S. *Dixie*, c/o Postmaster, San Francisco, California.
- Capt. W. Allen Beetham, 31st Engineers Regiment, Fort Belvoir, Virginia.
- Joseph B. Berke, Assistant Dental Surgeon (R), Groton Coast Guard Training Sta., Avery Point, New London, Connecticut.
- Lt. H. Chandler Bernard, DC, Dental Clinic, Camp Wheeler, Georgia.
- Lt. Harris Blake, DC, 0-1692267, Medical Dept. Training School, Robbins Field, Macon, Georgia.
- Lt. J. Theodore Caldwell, Camp Shenke, Orangeburg, New York.
- Lt. Richard E. Cofrancesco, DC, Med. Training School, Robbins Field, Macon, Georgia.
- Lt. Louis Frank Coroso, 78th Inf. 303rd. Med. Bn., Camp Butner, North Carolina.
- Lt. (j. g.) W. B. Costenbader, Norfolk Navy Yard Dispensary, Portsmouth, Virginia.

- Lt. Frederick J. Cuddy, Dental Clinic, Unit #1, Naval Training Station, Newport, Rhode Island.
- Capt. Emil Louis Curcio, DC, 32nd Ship Hospital Platoon, A.P.O. 4215, c/o Postmaster, New York City.
- Lt. Edward J. deKoning, Lawson General Hospital, Atlanta, Georgia.
- Lt. Thomas Van Donohue, DC, Med. Det. 176th Infantry, Fort Benning, Georgia.
- Lt. William S. Eramo, Co. 1, 101 Med. Regt., A.P.O. 502, c/o Postmaster, San Francisco, California.
- Major Kenneth David Eye, A.P.O. 846, c/o Postmaster, New York City.
- Capt. Gerson A. Freedman, 38th Division, Arty., Camp Livingston, La.
- Lt. Julius Friedman, DC, Robbins Field, Georgia.
- Lt. Aaron A. Guth, Fort Devens, Massachusetts.
- Lt. John J. Houlihan, Nashville Air Center Hospital, Nashville, Tennessee.
- Capt. Taffy Theodore Kobrinsky, C. D.C., 9# Clinic, 132 Portage Avenue E, Winnipeg, Canada.
- Lt. Samuel Morris, DC, 0-400513, Med. Det., 145th Inf., A.P.O. 37, c/o Postmaster, San Francisco, California.
- Lt. Com. Charles T. Pridgeon, DC, U.S.N., U. S. S. *Indiana*, c/o Postmaster, New York City.
- Lt. Rafael Escalona Roberts, A.P.O. 846, c/o Postmaster, New York City.
- Morris E. Rubin, U. S. Navy.
- Lt. Joseph H. Scanlon, Jr., U. S. S. *Terror*, c/o Postmaster, New York City.
- Capt. Alfred H. Schilling, 0-332620, 809th Engr. Bn. (A.V.N.) (S.E.P.), A.P.O. 528, c/o Postmaster, New York City.
- Lt. Marcy Lee Shulman, DC, Baer Field—Base Hospital, Fort Wayne, Indiana.
- Lt. Louis Sober, 715 Med. S. N. Co., Fort Riley, Kansas.
- Lt. Richard A. Soja, U. S. Naval Air Station, Bermuda, B. W. I., c/o Postmaster, New York City.
- Lt. Edward W. Wallwork.
- 1936
- Lt. Theodore G. Arends, DC, Army Air Force Basic Flying School, Cortland, Alabama.
- Capt. Howard Allen Carrill, 2nd Med. Bn., M.R.T.C., Camp Pickett, Virginia.
- Lt. Alfonse G. Centanni, Troop Service Command, Station Hospital, Army Air Base, Alliance, Nebraska.
- Capt. John W. Cronin, DC, 0-441388, General Hospital 142, A.P.O. 913, c/o Postmaster, San Francisco, California.
- Capt. William Frank Decesare, DC, A.A.F. A.F.S., Seymour, Indiana.
- Lt. Eugene J. Dionne, Orangebury Group, Camp Kilmer, New Brunswick, N. J.
- Lt. Isadore Glaser, DC, #1, Station Hospital, Fort Dix, New Jersey.
- Lt. Alvin A. Greenberg, Inshore Patrol, Ft. Calhoun St., Charleston, South Carolina.
- Capt. Samuel Hanik, 1342 S. U. Station Hospital, Holabird Ord. M. B., Baltimore, Maryland.
- Lt. Lawrence Harris, 1326 S. U., Med. Sec. #1, Station Hospital, Camp Lee, Virginia.
- Capt. Byron Wallace Inman, DC, 0-403355, General Hospital 42, A.P.O. 923, c/o Postmaster, San Francisco, California.
- Lt. Bernard Jerome, 0-370807, 5th Station Hospital, A.P.O. 926, c/o Postmaster, San Francisco, California.
- Lt. Louis Kreshtool, Station Hospital, Indiantown Gap M. R., Pennsylvania.
- Capt. Meyer Louis Levy, DC, 50th Pursuit Group, Orlando Air Base, Orlando, Florida.

- Lt. Norman F. Myers, DC, Station Hospital, Fort Eustis, Virginia.
- Lt. Walter J. Nelson, A.F.O.T.S., Roney Plaza, Miami Beach, Florida.
- Lt. (j. g.) Gerald M. Niebergall, U. S. S. *Pelias*, c/o Fleet Postmaster San Francisco, California.
- Lt. (j. g.) M. M. Riddlesberger, DC, Bainbridge Naval Training Station, Bainbridge, Maryland.
- Lt. Herbert Sabloff, 119th Medical Battalion, A.P.O. #44, Fort Lewis, Washington.
- Capt. John R. Switzer, Jr., 0-408930, Med. Detach., 116th Inf., A.P.O. 29, c/o Postmaster, New York City.
- Capt. Garrison G. Trupp, 630 Tank Destroyer Bn., Camp Bowie, Brownwood, Texas.
- Lt. William T. Walsh, DC, #1, Station Hospital, Fort Dix, New Jersey.
- 1937
- Lt. Harry Aks (MC) USNR, Bainbridge N.T.S., Bainbridge, Maryland
- Lt. Sol Barsky, DC, 468th Q. M., Truck Regiment, Camp Breckenridge, Kentucky.
- Lt. Curtis M. Beetham, Army Air Corps.
- Capt. Wilbur D. Burton, Jr., DC, General Hospital 118, A.P.O. 927, c/o Postmaster, San Francisco, California.
- Lt. (j. g.) William R. Casey, Dental Unit #1, Newport Naval Training Station, Newport, Rhode Island
- Lt. M. Rubin Colby, DC, #1, Station Hospital, Fort Dix, New Jersey.
- Lt. (j. g.) Richard J. Eamich, Coast Guard Mobile Dental Unit, 5th Naval District, Norfolk, Virginia.
- Capt. L. B. Finkelstein, U. S. Army.
- Capt. Isadore Edward Fox, 1378 S. U., Valley Forge General Hospital, Phoenixville, Pennsylvania.
- Lt. James A. Fulmer, Jr.
- George Glick, Station Hospital 1 NOPE, New Orleans, Louisiana.
- Lt. Jesse J. Greenberg, Officers Training School, S. Antonio Avia. C. Tr. C., Duncan Field, San Antonio, Texas.
- J. C. Heck, Naval Training Station, Newport, Rhode Island.
- Lt. Victor Lemoine Heuser, DC—V(S) USNR, Sampson Naval Training Sta., Geneva, New York.
- Lt. (j. g.) Peter T. Kanelos, Newport Training Station, Coddington Point, Newport, Rhode Island.
- Lt. (j. g.) Melvin R. Leonard, Naval Air Station Dispensary, N.O.B., Norfolk, Virginia.
- Lt. Simon Markos, DC, Station Hospital, Daniel Field, Augusta, Georgia.
- Capt. Boleslaw W. Miksinski, DC, AUS, Station Hospital, Fort Dix, New Jersey.
- Lt. E. Linwood Myers, Naval Aviation Cadet Selection Bd., 1320 G Street, N.W., Washington, D. C.
- Lt. Benjamin L. Poster, 1318th Service Unit, Station Hospital, Camp Pickett, Virginia.
- Capt. Gordon S. Pugh, DC, Station Hospital, Camp Butner, North Carolina.
- Lt. Joseph E. Ralph, DC, Camp Chaffee, Arkansas.
- Lt. (j. g.) Frank John Roh, USN, Armed Guard School, Section Base, Med. Dept., Little Creek, Virginia.
- Lt. I. Harvard Rosen, U. S. Naval Training Station, Bainbridge, Maryland.
- Maj. Alonzo LePage Seidler, DC, USA, Camp McCain, Mississippi.
- Lt. Morris D. Simon, DC, Station Hospital, Daniel Field, Augusta, Georgia.
- Capt. Darwin R. Swinehart, Walter Reed Hospital, Washington, D. C.

1938

- Lt. Milton B. Asbell, DC, 707 Military Police Bn., A.P.O. 1295, c/o Postmaster, New York City.
- Lt. Carl E. Bailey, DC, 0-403685, General Hospital 42, A.P.O. 923, c/o Postmaster, San Francisco, California.
- John P. Barker, United States Public Health, Marine Hospital, Baltimore, Maryland.
- Lt. (j. g.) Bradley B. Barnes, DC, U. S. Naval Dental Clinic, Navy Yard, Brooklyn, New York.
- Capt. Alex L. Boro, Station Hospital, Edgewood Arsenal, Maryland.
- Lt. Frank P. Cammarano, DC, Fort Meade, Maryland.
- Lt. Sigmund Cohen, DC, Hq. 84th Ord. M. M. Bn. (Q), Fort Ethan Allen, Vermont.
- Lt. David Cooper, 0-480785, H. & D. Company, 827th Engineers Bat. (Avn), A.P.O. 3085, c/o Postmaster, New York City.
- Lt. Edwin D. Cruitt, DC, 71st Coast Artillery (A.H.), General Delivery, Washington, D. C.
- Lt. Leonard DuBoff, DC, 10th Medical Bn., Camp Hale, Colorado.
- Lt. Wilbur N. Falk, DC, 39th General Hospital, A.P.O. 3284, c/o Postmaster, San Francisco, California.
- Lt. (j. g.) Charles C. Farrington, Dental Clinic Unit #1, Naval Training Station, Newport, Rhode Island.
- Lt. (j. g.) Henry J. Gemski, DC, U. S. Naval Dental Clinic, Navy Yard, Brooklyn, New York.
- Lt. Jack S. Haggerty, DC, Station Hospital, Fort Belvoir, Virginia.
- Lt. Perley B. Hartwell, DC, Med. Det., 102nd Inf. (R), A.P.O. 919, c/o Postmaster, San Francisco, California.
- Lt. Roland W. Heil, DC, AUS, Walter Reed Hospital, Washington, D. C.
- Lt. W. Basil Johnson, Jr., DC, USN, U. S. Naval Hospital, Pensacola, Florida.
- Lt. Charles S. Jonas.
- Capt. Louis D. Kern, DC, Office of Detachment Commander, Brookley Field, Alabama.
- Lt. Com. Leonard L. Levin, U. S. S. *Ancon*, c/o Postmaster, New York City.
- Capt. Eugene D. Lyon, DC, 0-319387, General Hospital 118, A.P.O. 927, c/o Postmaster, San Francisco, California.
- Lt. Charles P. McCausland, DC, Camp Croft, South Carolina.
- Lt. Clarence V. McMillin, DC, Medical Detachment, 46th Ordnance Battalion, A.P.O. 957, c/o Postmaster, San Francisco, California.
- Captain Edmond F. Marsh, Army Air Base, Pope Field, Ft. Bragg, North Carolina.
- Capt. L. P. Massucco, DC, Division-Headquarters Co., A.P.O. 257 c/o Postmaster, Los Angeles, California.
- Lt. Craig P. Mathias, DC, Station Hospital, A.A.F.A.F.S., Marfa, Texas.
- Harry B. Mendelsohn, Station Hospital, Key Field, Meridian, Mississippi.
- Maj. Jack M. Messner, General Dispensary, U. S. Army, Washington, D. C.
- Capt. H. Beryl Morris, DC, #1, Station Hospital, Fort Dix, New Jersey.
- Lt. Edward J. Muller, Dental Clinic Unit 1, Naval Training Station, Newport, Rhode Island.
- Lt. Floyd W. Neal, DC, 0-530468, Station Hospital, Greenville Army Air Base, Greenville, South Carolina.
- Lt. David Saltman, DC, Aberdeen Proving Ground, Aberdeen, Maryland.
- Lt. Edward A. Slavinsky, DC, 441 Coast Artillery Bat., Camp Stewart, Georgia.
- Lt. Jerry J. Stepan, 0-371908, 135th Med. Reg't., Co. H, A.P.O. 921, c/o Postmaster, San Francisco, California.

- Lt. Ford A. Stewart, Station Hospital, Camp Rucker, Alabama.
 Capt. Raymond M. Theodore, DC, Fort Meade, Maryland.
 Lt. Seymour Turok, DC, #1, Station Hospital, Fort Dix, New Jersey.
 Lt. Sterling J. Weigel, DC, Officers Training School, S. Antonio Avia., C. Tr. C., Duncan Field, San Antonio, Texas.
 Lt. (j. g.) E. O. Wheeler, USNR, Naval Air Station Dispensary, N.O.B., Norfolk, Virginia.
 Lt. (j. g.) Ernest V. Williams, USNR, Naval Air Station Dispensary, N.O.B., Norfolk, Virginia.
- 1939
- Lt. (j. g.) Joseph P. Allen, DC, USNR, 45th Construction Bn., c/o Fleet Post Office, San Francisco, California.
 Lt. (j. g.) Bernard B. Auerbach, DC, Camp Peary, Williamsburg, Virginia.
 Capt. Frank A. Brown.
 Lt. (j. g.) Antone R. Carvalho, Unit 1, Dental Clinic, Naval Training Station, Newport, Rhode Island.
 Lt. James C. Davis, DC, 0-470555, Station Hospital, A.P.O. 608, c/o Postmaster, Miami, Florida.
 Lt. William B. Feindt, 31st. Sig. Cons. Bn., Camp Atterbury, Indiana.
 Lt. Garnet P. Francis, Jr. (on Corregidor at time of its surrender).
 Lt. Eugene M. Gane, DC, Woodrow Wilson Hospital, Staunton, Virginia.
 Lt. Paul Gilden, Station Hospital, New Orleans Post Embarkation, Jefferson Branch, New Orleans, Louisiana.
 Lt. Leonard N. Goldstein, DC, AUS, Station Hospital #1, Camp Edwards, Massachusetts.
 Lt. Harry C. Grove, Jr., Dental Air Corps, Mitchell Field, Long Island, New York.
 Lt. Robert H. Jakob, 0-615752, 4th Service Command, Atlanta, Georgia.
- Lt. Marshall I. Kader, Camp Butner, North Carolina.
 Major Frederick R. Krug, DC, USA, Hq. 92nd Inf. Division, Fort McClellan, Alabama.
 Lt. Isidore Legum, M.D.R.P. M.T.R.C., Camp Pickett, Virginia.
 Lt. (j. g.) William L. McConnell, Camp Peary, Ship's Co., Williamsburg, Virginia.
 Capt. Irving L. Maislen, Military Reservation, Indiantown Gap, Pennsylvania.
 Capt. Leon Meinster, DC, Fort Macon, Morehead City, North Carolina.
 Lt. Max Miller, 84th Arm'd Med. Bn., 14 Arm'd Division, Camp Chaffee, Arkansas.
 Capt. Albert W. Morris, 6th Medical Training Btn. M.R.T.C., Camp Pickett, Virginia.
 Lt. Harold E. Plaster, Maxwell Field, Montgomery, Alabama.
 Lt. Seymour A. Rabinowitz, DC, 802 Tank Destroyer Bat., Camp Hood, Texas.
 Lt. J. G. Rosen, Schofield Barracks, 11th Medical Regiment, Oahu, Hawaii.
 Lt. Oscar J. Schoepke, 113th Station Hospital, Camp Chaffee, Arkansas.
 Capt. Erwin E. Shea, U. S. Army.
 Lt. Edward R. Stinebert, Medical Detachment, 117th Engineers, Bn. C., A.P.O. 37, c/o Postmaster, San Francisco, California.
 Capt. W. C. Tinsley, Medical Detachment, 31st Coast Artillery (H. D.), Fort Taylor, Florida.
 Capt. Michael S. Varipatis, Ordnance Training Center, Aberdeen Proving Ground, Maryland.
 Lt. Irving S. Weiner, 32nd Station Hospital, Ft. Benning, Georgia.
 Capt. Dan Wright, DC, 339th Engineers, Camp Butner, North Carolina.

1940

- Lt. Sidney Alfred Bell, DC, USA, Station Hospital, Fort Benning, Georgia.
 John T. Bonham, Assistant Dental Surgeon (R), U. S. Public Health Service.
 Lt. Benjamin Diamond, Station Hospital, Camp Tyson, Tennessee.
 Lt. (j. g.) Samuel Goldhaber, DC, USNR, U. S. Marine Corps, Unit 735, c/o Postmaster, San Francisco, California.
 Capt. Jules Kaswick, DC.
 Capt. Eugene L. Pessagno, Jr., DC, 0-499164, 1333 Service Unit, General Dispensary, 2620 Grey's Ferry Avenue, Philadelphia, Pennsylvania.
 Lt. Bernard Randman, DC, Station Hospital, Camp Barkeley, Abilene, Texas.
 Lt. Horace L. Westcott, DC, 66th Medical Regiment, Camp Barkeley, Texas.

1941

- Lt. Frederick Aurbach, 435th C. A. (A. A.), Camp Hulen, Texas.
 Lt. Robert N. Baker, Mobile Dental Unit #4, Coast Guard Capt. of the Port, Tarpon Springs, Florida.
 Lt. (j. g.) Sterrett P. Beaven, DC, USNR, Naval Receiving Station, Houston, Texas.
 Lt. Benjamin Birchstein, Camp Pickett, Virginia.
 Lt. (j. g.) Edmund L. Bohne, United States Public Health Service, DC, Fort McHenry, Maryland.
 Lt. Edward Bressman, 317th Med. Bn., 92nd Infantry Division, Fort McClellan, Alabama.
 Lt. Melvin R. Briskin, U. S. Navy.
 Lt. A. Alfred Brotman, 47th Bomb Group, Morris Field, North Carolina.
 Lt. (j. g.) Joseph P. Burch, USNR, Navy Dental Clinic, Cape May, New Jersey.
 Lt. Paul B. Castelle, 0-430415, Co. A., 261st Med. Btn., A.P.O. 700 c/o Postmaster, New York City.

- Lt. William M. Collins, DC, USN, Naval Const. BTN. #17, Sec. 2, Navy 216, c/o Postmaster, New York City.
 Lt. Jerome S. Cullen, USNR, 8155 c/o Fleet Post Office, Postmaster, New York City.
 Lt. Morton DeScherer, DC, Medical Detachment, 8th Infantry, Camp Gordon, Augusta, Georgia.
 Capt. Paul S. Dubansky, 1135th Combat Engineers, Camp Van Dorn, Mississippi.
 Lt. (j. g.) James F. Easton, Jr., Naval Training Station, Norfolk, Virginia.
 Capt. Daniel L. Farrell, DC, Station Hospital, Aberdeen Proving Ground, Maryland.
 Donald T. Frey, U. S. Public Health Service, Marine Hospital, Baltimore, Maryland.
 Lt. Maxwell S. Golden, U. S. Army.
 Lt. Abraham Gudwin, 0-484408, Med. Det. 10th Inf., A.P.O. 5, c/o Postmaster, New York City.
 Lt. (j. g.) V. R. Hawkins, Yard Dispensary, Navy Yard, S. C.
 Earl C. Hewitt, U. S. Public Health Service, Marine Hospital, Norfolk, Virginia.
 Leonard Kapiloff, U. S. Public Health Service, National Maritime Training Station, Gallup's Island, Boston, Massachusetts.
 Lt. S. Martin Karow, 376 Sep. Bn. CA (AA), Camp Stewart, Georgia.
 Lt. Kenneth D. Kornreich, DC.
 Lt. Mario A. Lauro, DC, USD, 2nd Depot, Camp Edwards, Massachusetts.
 Lt. (j. g.) Ronald Lawrence, Naval Training Station, Norfolk, Virginia.
 Capt. J. Govane McClees, 0-485496, 110th Station Hospital, A.P.O. 511, c/o Postmaster, New York City.
 Lt. E. Paul McDaniel, DC, USA.
 Lt. (j. g.) Frank Marano, Naval Air Station, Quonset Point, Rhode Island.

- Lt. Edward A. Mishkin, FA—RTC
Dental Clinic, Fort Bragg, North
Carolina.
- Lt. A. A. Ollman, Station Hospital, Camp
Hood, Texas.
- Lt. Malcolm M. Parker, 39th Station
Hospital, Camp Barkeley, Texas.
- Lt. George Reusch, DC, Station Hospital,
1326 Service Unit, Camp Lee, Virginia.
- Lt. (j. g.) Edward Rosenberg, DC,
U. S. S. *Susan B. Anthony*, c/o Post-
master, New York City.
- Capt. Frederick B. Rudo, DC.
- Lt. LeRoy E. Schiller, Ninth General
Hospital, Fort Andrews, Boston, Mas-
sachusetts.
- Lt. (j. g.) Carl H. Schultheis, Naval
Training Station, N.O.B., Norfolk,
Virginia.
- Lt. Harry Sloan, DC, Station Hospital,
Pine Camp, New York.
- Bernard Smith, U. S. Public Health
Service, Marine Hospital, Norfolk,
Virginia.
- Lt. Murray Storch, 0-423206, 26th Port-
able Hospital, A.P.O. 922, c/o Post-
master, San Francisco, California.
- Lt. Charles Taub, Station Hospital,
Fort Dix, New Jersey.
- Lt. Erminio R. Vitolo, Medical Detach-
ment, A.P.O. 825, c/o Postmaster,
New Orleans, Louisiana.
- Lt. Irving I. Weinger, DC, 175th Engi-
neers Regt., A.P.O. 668, c/o Postmaster,
New York City.
- Lt. Jack Irving Zeger, DC, Station
Hospital, Camp Kilmer, New Jersey.
- Lt. (j. g.) Raynard F. Zuskin, USNR,
Dental Clinic, Naval Training Station,
Norfolk 11, Virginia.
- Lt. Andrew J. Amatrudo, Hq. Co. 6th
Port of Embarkation, A.P.O. 668,
c/o Postmaster, New York City.
- Capt. Clifford F. Askins, DC, USA,
Maxwell Field, Alabama.
- Lt. Alexander N. Berman, DC, Station
Hospital, Fort Mason, California.
- Lt. Daniel W. Bixby, M.R.T.C.—M.P.,
Quarters 10-10, Camp Pickett, Vir-
ginia.
- Peter J. Coccaro, U.S.P.H.S., Marine
Hospital, San Francisco, California.
- Lt. Sylvan P. Cohen, DC, Station
Hospital, Camp Polk, Louisiana.
- Lt. Woodrow W. Corder, DC, Station
Hospital, Huntsville Arsenal, Ala-
bama.
- Capt. James T. Criss, DC, 556 S. A. W.
Bn., A.P.O. 860, c/o Postmaster,
New York City.
- Lt. Morris Eilenberg, DC, Hq. 317
Med. Bn., 92nd Infantry Division,
Fort McClellan, Alabama.
- Lt. Joseph A. Emburgia, DC, 806 T. D.
Bn., Camp Rusher, Alabama.
- Lt. Stanley Entelis, DC, 493 Arm'd
F. A. Bn., Camp Campbell, Ken-
tucky.
- Capt. Richard H. Goldstein, DC, 535
Q. M. Service Bn., A.P.O. 4834,
c/o Postmaster, New York City.
- Capt. Bernard Helitzer, DC, Camp
Phillips, Kansas.
- Lt. Alan H. Herman, DC, 605th Field
Artillery Bn., Camp Carson, Colorado.
- Samuel L. King, U. S. Public Health
Service, Marine Hospital, New Orleans,
Louisiana.
- Lt. Irvin O. Kolman, DC, A.P.O. 997,
c/o Postmaster, Seattle, Washington.
- Lt. Seymour Koppelman, DC, 495 Arm'd
Field Artillery Bn., A.P.O. 262, Camp
Campbell, Kentucky.
- A. P. Lazauskas, U. S. Coast Guard, Kill
Devil Hills, N. C.
- Lt. Jorge E. Munoz, U. S. Army.

- Lt. Murray Nussbaum, DC, AUS., Co. B, Supply Bn., 12th Armored Div., A.P.O. 262, c/o Postmaster, Camp Campbell, Ky.
- Ensign Norman R. Nathanson, AC, USNR, Corpus Christi, Texas.
- Lt. Raymond T. Ouellette, DC, Station Hospital, Indiantown Gap, Pennsylvania.
- Lt. (j.g.) J. B. Powell, USNR, The Dispensary, Norfolk Navy Yard, Portsmouth, Virginia.
- Chester B. Ralph, U. S. Public Health Service, Marine Hospital, Memphis, Tennessee.
- Lt. Mario F. Ramirez, DC, 0-480771, Station Hosp., 130th Engrs. Bn., A.P.O. 827, c/o Postmaster, New Orleans, Louisiana.
- Lt. J. Ralph Reynolds, DC #1, Hq. 46th Med. Bn. Armored, A.P.O. 254, Camp Bowie, Texas.
- Lt. David M. Salutsky, DC, U. S. Army.
- Lt. (j.g.) Harold Schwartz, USNR, U. S. Naval Training Station, Bainbridge, Maryland.
- Lt. (j.g.) Glenn D. Steele, DC, USNR, U. S. Naval Training Station, Great Lakes, Illinois.
- Lt. (j.g.) Chester J. Stoopack, USNR, Dental Office, Rodd Field, Corpus Christi, Texas.
- Lt. Lewis C. Toomey, General Hospital 118, U. S. A., A.P.O. 927, c/o Postmaster, San Francisco, Calif.
- Lt. Edwin B. Waltman, DC, Scott Field, Belleville, Illinois.
- Lt. (j.g.) Howard F. Watsky, USNR, Norfolk Naval Station, Norfolk, Virginia.
- Lt. Howard G. Weiss, DC, Station Hospital, Boca Roton Air Field, Boca Roton, Florida.
- Lt. John T. Wieland, DC, Dental Officer, 9th Special U.S.N.C. Bn., c/o Fleet Post Office, San Francisco, California.
- Lt. (j.g.) Roger E. Williams, USNR, Amphibious Training Base, Camp Bradford, N.O.B., Norfolk, Virginia.

1943

- Lt. David Randall Book, DC, AUS, Base Dental Clinic, MacDill Field, Tampa, Florida.
- Lt. Frank J. Bryce, DC, 0-377351, Med. Det., 745th Tank Bn. (M), A.P.O. 305, c/o Postmaster, New York City.
- Lt. Asher B. Carey, Jr., Station Hospital, Dodge City A.A.F., Dodge City, Kansas.
- Lt. W. P. Carter, 725th Signal A. W. Co., Drew Field, Florida.
- Lt. John C. Carvalho, DC, Ellington Field, Houston, Texas.
- Lt. Oscar Check, U.S.A., Station Hospital, Camp Livingston, Louisiana.
- Lt. Harry W. Cooper, Station Hospital, Perrin Field, Sherman, Texas.
- Lt. Leo J. Czachorowski, USA, Army Air Base, Pocatello, Idaho.
- Lt. Charles DiGristine, DC, Station Hospital, Army Air Base, Salt Lake City, Utah.
- Lt. James V. DiTrollo.
- Lt. Sidney M. Dulberg, DC, 16th Arm'd Div., (Supply Bn.), A.P.O. 412, Camp Chaffee, Arkansas.
- Lt. Lepo Eff, DC, Station Hospital, Frederick Army Air Field, Frederick, Oklahoma.
- Lt. Irving Feigenbaum, 96th Reconnaissance Bn., 16th Armored Division, Camp Chaffee, Arkansas.
- Lt. Milton Feldman, 216th Medical Battalion, 16th Armored Division, A.P.O. 412, Camp Chaffee, Arkansas.
- Lt. Leo Fishman, DC, Station Hospital, Drew Field, Tampa, Florida.
- Lt. Paul B. Foxman, 224th Medical Co., Camp Mackall, North Carolina.
- Lt. Mont M. Gardner, Station Hospital, Robbins Field, Georgia.
- Lt. Harold H. Goodman.

- Lt. Howard J. Hauss.
Lt. Morton Kaufman, DC, Co. C, 2nd Bn. M.R.T.C., Camp Pickett, Virginia.
Lt. Joseph Klein.
Lt. Hyman Kraman, DC, Station Hospital, Drew Field, Tampa, Florida.
Lt. Jack Kushner, Co. D, 324th Med. Bn., A.P.O. 449, U. S. Army, Camp Van Dorn, Mississippi.
Lt. Lester Langel, USA, A.A.F.B.S. Station Hospital, Big Spring, Texas.
Lt. William G. Lee, DC, AUS, B.O.Q. 555 Graham Road, Ft. Sam Houston, San Antonio, Texas.
Lt. Bernard B. Leibowitz, DC.
Lt. Lawrence B. Levine, Co. A, 5th Bn., M.R.T.C., Camp Pickett, Virginia.
Lt. Herbert S. Levy, DC, AUS, 427 Sig. Con. Bn., Langley Field, Va.
Lt. Lewis S. Libby, Jr., Dental Clinic, Air Depot Training Station, Albuquerque, New Mexico.
Lt. Michael P. Liloia.
Lt. Kenneth S. McAtee, DC, AUS, Base Dental Clinic, MacDill Field, Tampa, Florida.
Lt. Alfred Martino.
Lt. Calvin Mass, Station Hospital, Walla Walla, Washington.
Lt. Joseph Masserman, Co. D, 324th Med. Bn., A.P.O. 449, U. S. Army, Camp Van Dorn, Mississippi.
Lt. John W. Menius, Jr., Base Dental Clinic, MacDill Field, Tampa, Florida.
Lt. Philip Nussbaum, DC, AUS, Tank Destroyer Center, Camp Hood, Texas.
Lt. Philip Pedinoff, DC, Station Hospital, Drew Field, Tampa, Florida.
Lt. Harry G. Pfeffer, Station Hospital, Camp McCain, Mississippi.
Lt. James T. Reilly, DC, Med. Det. 296th Inf., A.P.O. 850, c/o Postmaster, New York City.
Lt. Kolman M. Rosenberg, DC, Kessler Field, Mississippi.
Lt. Norman H. Rubin, DC, Det. Med. Dept., Station Hospital, Drew Field, Tampa, Florida.
Lt. William Rubin, DC, AUS, Station Hospital, Dental Clinic, Camp Gruber, Oklahoma.
Lt. Alexander Schechter, Co. D, 324th Med. Bn., A.P.O. 449, U. S. Army, Camp Van Dorn, Mississippi.
Lt. Justin M. Seides.
Lt. Daniel Shaw, Station Hospital, Kelly Field, San Antonio, Texas.
Lt. Thomas R. Simpson, Station Hospital, Herbert Smart Field, Macon, Georgia.
Lt. Russell P. Smith, Station Hospital, Herbert Smart Field, Macon, Georgia.
Lt. Eugene Spanier.
Lt. Riley E. Spoon, Jr., 0-1735260, Station Hospital, Ft. Oglethorpe, Georgia.
Lt. Martin Stern, DC, 550th Med. Hosp. Ship Ptn., Camp Myles Standish, Taunton, Massachusetts.
Lt. Sidney Sucoll, Med. Tr. Section, Robbins Field, Georgia.
Lt. William M. Tunstall, Jr., DC, Det. Med. Dept., Station Hospital, Drew Field, Florida.
Lt. (j.g.) B. M. Watson, DC, USNR, Dispensary, U. S. N. A. S., Olathe, Kansas.
Lt. Anthony P. Yablonski, DC, AUS, Army Air Forces Transition School, Dodge City Army Air Field, Kansas.
Lt. Julius Zahn.

MARCH COMMENCEMENT ACTIVITIES

THE graduation and alumni activities of the March Commencement were markedly different from the Commencement programs of other years. However, despite the comparative informality of the program, most of the annual features of the traditional B.C.D.S. Commencement were retained.

OMICRON KAPPA UPSILON

Phi Chapter of Omicron Kappa Upsilon held its annual convocation and dinner on March 8, at the Southern Hotel. The honorary member for 1943 was Dr. Thomas S. Eader, of Frederick, Maryland, who was presented by Dr. Burt B. Ide. The alumni members were Arthur H. Lepine (U. of M. 1914), of Holyoke, Massachusetts, and Nathan H. Perry (B.C.D.S. 1918), of Baltimore; they were presented by Dr. B. Sargent Wells. The honored members of the graduating class were presented for induction by Dr. Myron S. Aisenberg: John B. Blevins, Centreville, Maryland; David R. Book, Baltimore; Frank J. Bryce, Florence, South Carolina; Asher B. Carey, Jr., Frankford, Delaware; Irving Feigenbaum, Brooklyn, N.Y.; Jack Kushner, New York; Arthur J. Lepine, Holyoke, Massachusetts; John W. Menius, Monroe, North Carolina; David B. Scott, Providence, Rhode Island; Riley E. Spoon, Jr., Winston Salem, North Carolina. The Rev. Edward B. Bunn, S.J., President of Loyola College, was the guest speaker.

THE SENIOR AWARDS

The Senior Prize Contests were held at the School during the morning of March 8. The prizes, together with the several other medals and honors, were presented at the Alumni banquet and dance, held at the Southern Hotel on March 9.

University Gold Medal for Scholarship: Riley Spoon, Jr.

Certificates of Honor: Riley Spoon, Jr. (Magna Cum Laude), John Blevins (Cum Laude), Arthur Lepine, David Book, Jack Kushner, John Menius, Jr.

Isaac H. Davis Memorial Medal for Cohesive Gold Fillings: John Menius, Jr. Honorable Mention: Arthur Lepine.

Albert S. Loewenson Memorial Medal for Full Mouth Restoration: Riley Spoon, Jr. Honorable Mention: Jack Kushner.

Alex H. Paterson Medal for Practical Set of Full Upper and Lower Dentures: John Menius, Jr. Honorable Mention: David Book.

Harry E. Kelsey Award for Professional Demeanor: Arthur Lepine.

Alumni Association Gold Medal for Thesis: Kenneth McAtee, Berryville, Virginia. Honorable Mention: David Scott, Providence, Rhode Island.

Keys Awarded for Meritorious Work on the *Mirror*: David Book, Riley Spoon, Jr., John Blevins, Jack Kushner.

Award (\$25.00—Contributed by Dr. James H. Samuel '14) for Best Paper in Dental History: David Scott.

Award (\$25.00—Contributed by Dr. Edgar J. Jacques '17) for Meritorious Work in Practical Oral Surgery: Asher Carey, Jr.

Certificate of Merit for Outstanding Work in Practical Pedodontia: John Menius, Jr.

C. V. Mosby Co. Award: Ben Watson, Brazil, S.A.

ALUMNI MEETING

The annual business meeting of the National Alumni Association of the B.C.D.S. was held at the School on March 9. The meeting, which was well attended, was followed by a luncheon served in the

dining hall of the University Hospital. The present officers of the Association are as follows:

James H. Samuel, President, 55 Park Place, Morristown, N.J.

F. Noel Smith, President-Elect, Medical Arts Building, Baltimore.

Major General Robert H. Mills, DC, USA, Vice-President.

Francis A. Sauer, Secretary, 4600 Park Heights Avenue, Baltimore.

Howard Van Natta, Treasurer, Medical Arts Building, Baltimore.

Meyer Eggatz, Editor, Historian and Librarian, Medical Arts Building, Baltimore.

Executive Council:

Elmer F. Corey, Chairman, 1901 E. Thirty-first Street, Baltimore, 1944.

Major Albert C. Eskin, DC, AUS, 1944.

Captain Myron I. Price, DC, AUS, 1945.

George J. Phillips, Professional Building, Baltimore, 1945.

Kyrle Preis, 700 Cathedral Street, Baltimore, 1946.

H. Hayward Streett, 829 Park Avenue, Baltimore, 1946.

Lawrence W. Bimestefer, 1 Kinship Road, Dundalk, Md., 1947.

Daniel E. Shehan, Medical Arts Building, Baltimore, 1947.

ALUMNI DINNER

A very impressive feature of the Commencement program was the dedication of the School's Service Flag and the Memorial Tablet containing the names of the sons of the B.C.D.S. who have given their lives in the service of their country. Dean Robinson's dedicatory remarks are printed on another page. The frontispiece of this issue of the JOURNAL is a picture of the Flag and the Memorial that now are on the wall of the entrance hall of the School. Also on the wall are hung the pictures of the four men whose names are on the Memorial.

LIFE MEMBERSHIP

IN THE

NATIONAL ALUMNI ASSOCIATION

OF THE

BALTIMORE COLLEGE OF DENTAL SURGERY,

DENTAL SCHOOL, UNIVERSITY OF MARYLAND

Created at the last business meeting of the Association this membership provides that any active member of the National Alumni Association may, on payment of \$100.00, be automatically elected to LIFE MEMBERSHIP without further payment of annual dues. All privileges of active membership are accorded those who become life members.

Life membership payments will be placed in a special fund from which payments will be made from accumulated interest to projects such as research or other activities of the Alumni Association which are deemed of unusual importance meriting support by the organization.

Payments which we hope will be readily forthcoming from many members may be sent to Howard Van Natta, Treasurer, Medical Arts Bldg., Baltimore-1, Md.

JAMES H. SAMUEL, *President*
National Alumni Association

Life Membership Committee
Arthur I. Bell, *Chairman*
George M. Anderson
Howard Van Natta

THE ASSISTANCE OF THE DENTIST IN THE FIELD OF PLASTIC AND RECONSTRUCTIVE SURGERY*

GEORGE M. ANDERSON, D.D.S., F.A.C.D.

IF THE average person, professional or lay, were asked as to the scope of dental aid he would answer: (1) the repair or filling of teeth, (2) the removal or extraction of teeth, (3) the replacement of lost teeth. But in the domain of dentistry, as a result of necessity, certain other highly specialized fields have developed. Among them is one in which I have a particular interest, and one which because of benefits to be had from it is of considerable interest to the plastic and reconstructive surgeon. This special field, orthodontics, has as its main objective straight and useful teeth. In order to realize this ideal situation for the patient the orthodontist uses within the mouth on the teeth small mechanical appliances constructed on sound engineering principles. Two essentials which must receive recognition in the development of these appliances are (1) resistance to stress and (2) distribution of force. In order to have them under control in an area as small as the mouth where they are constantly being subjected to the adverse effects of mastication of food and muscular stress an ingenuity of plan with better than reasonable exactness in construction and manipulative details is demanded. This is entirely possible in simon-pure orthodontics in which the opportunity for consideration of the needs of a particular problem is not restricted by a demand for immediate action as is so often the case when surgery is required. It may be said

to be a bio-mechanical science wherein pathology as the surgeon thinks of it is seldom a dominant factor. Hence, ample time is to be had for study, and a plan for immediate action is seldom necessary.

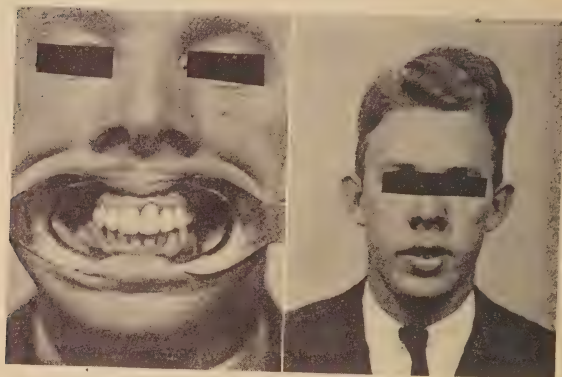
Such a situation does not exist when the orthodontist is called upon by the surgeon for suggestions as to mechanical aid in supplying resistance and force through delicate appliances as an adjunct to surgery. Advice and help are frequently wanted at once and there should be no delay in making a decision as to plan and the execution of it. The orthodontist may be asked to produce something today for use tomorrow. This he may be able to do, with both surgeon and orthodontist recognizing that the product of his mechanical ingenuity is but a temporary expedient designed to serve only until a more permanent or suitable support may be developed. (Certain of the illustrations emphasize this problem.)

It has been the good fortune of the orthodontists to be able to call upon members of the American Society of Plastic and Reconstructive Surgery for remedial measures concerning the teeth, jaws and face when the evidence at hand indicated that orthodontics could not supply the beneficent effects desired by the patient. In turn members of the Society have called upon the orthodontists to aid when the evidence indicated that methods other than surgery would probably be beneficial to the patient. We do have, therefore, in certain problems, a mutual understanding to aid each other. The illustrations show what we, as orthodontists, may do for the patient without the aid of the surgeon or in collaboration with him.

* This paper was read by Dr. Anderson at the Annual Meeting of the American Society of Plastic and Reconstructive Surgery in Baltimore, on December 5, 1942.

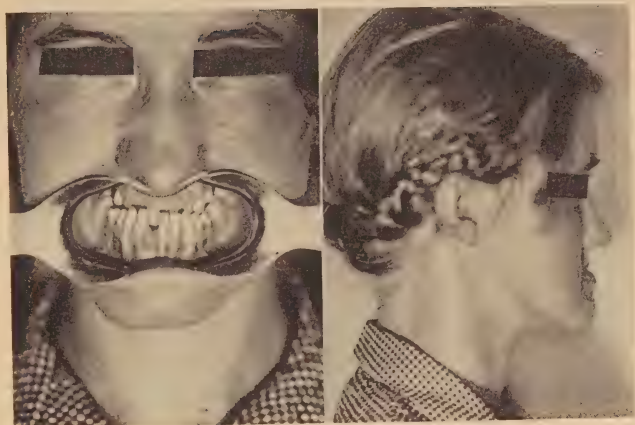


A



B

Case I. Maxillary protrusion corrected by orthodontic procedures: reshaping maxillary arch and retracting incisors. A. Before treatment. B. After treatment.

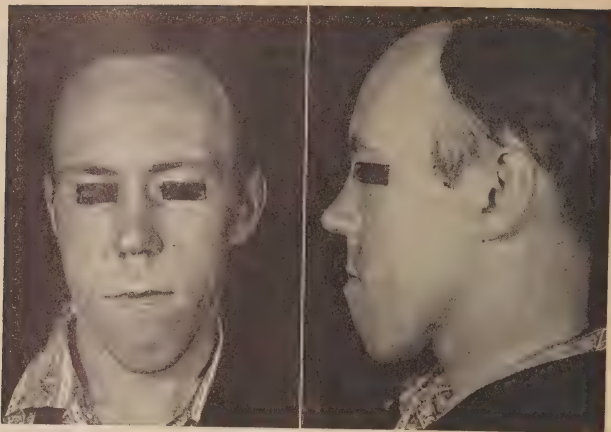


A

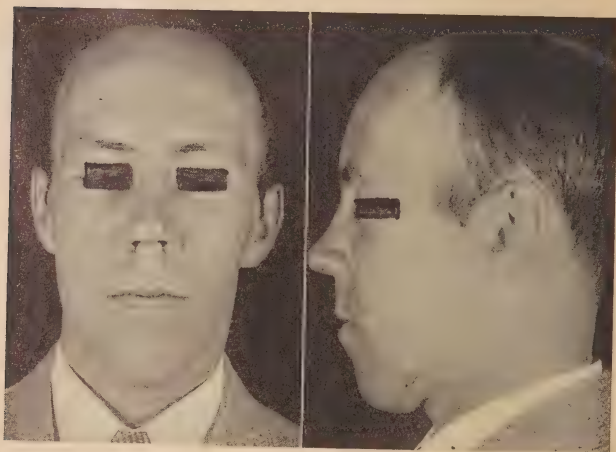


B

Case II. Mandibular protrusion: maxillary incisors striking lingual to and below mandibular incisors. Facial effect bad, psychological effect pronounced. A. Before treatment. B. After treatment.

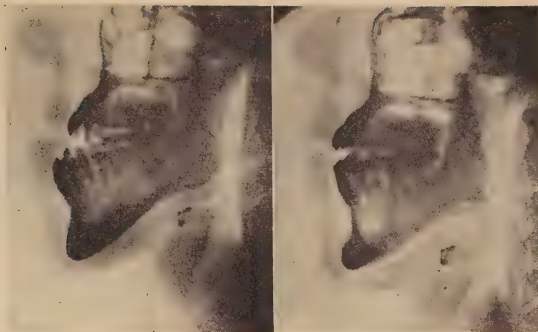


A

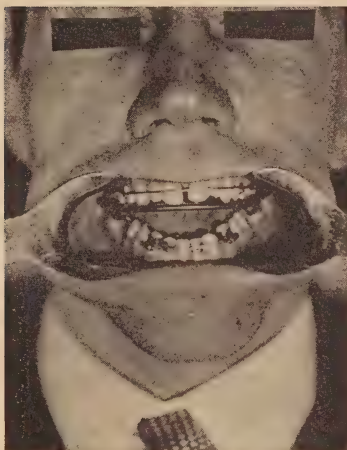


B

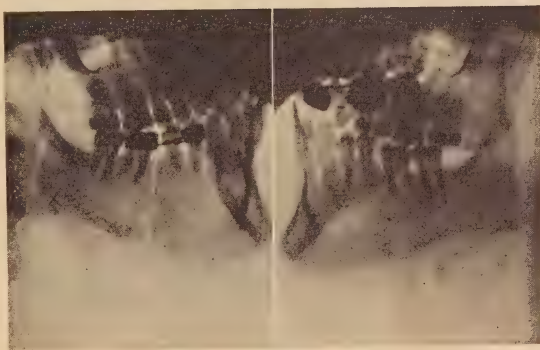
Case III. Mandibular prognathism-nonacromegalic. Pronounced open bite or failure of incisors to meet. Corrected by surgery—John Staige Davis, M.D., Edward Kitlowski, M.D. A. Before treatment. B. After treatment. C. Probilographs: before surgery, after surgery. D. Appliances, placed prior to surgery, used to stabilize severed parts. Open bite is pronounced. E. Radiographs illustrating bone union four months after surgery.



C

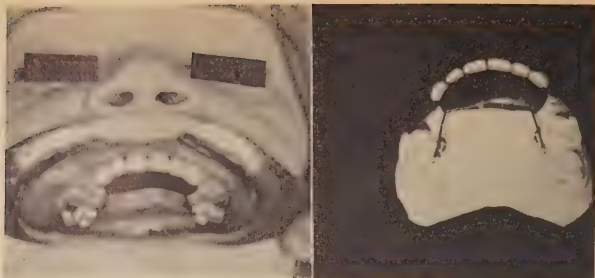


D



E

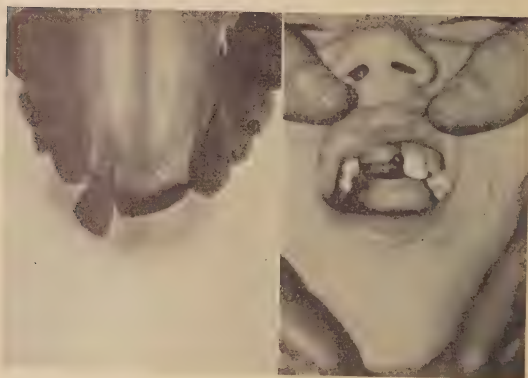
Case III
25



Case IV. Accident at eight years of age. Maxillary incisors knocked out. To preserve facial form and lip development as well as to provide reasonable means of incisive mastication, a small plate was made, attached to wire, and in turn attached to bands on molar teeth. The plate was changed from time to time, gradually being increased in size as arch development progressed. Considering the age of the patient and the incident difficulties, the results were splendid.

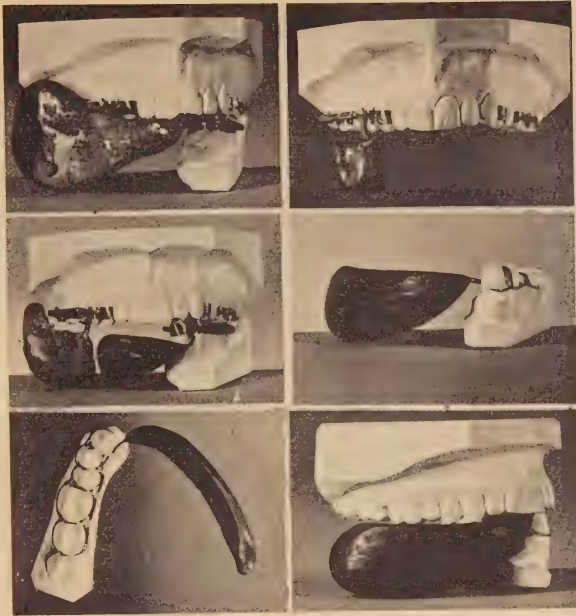


A



B

Case V. Accident—maxillary incisors knocked out, lip adhering to and binding down gingival tissues, creating unsatisfactory appearance and lip function. A small wire on the lingual side of the teeth was attached to bands cemented on molar teeth. The wire carried a plug of highly polished acrylic kept lubricated with vaseline. This procedure lessened the chance of adherence of the severed tissues at time of operation. A. Before. B. Appliance in place.



A



B

Case VI. Removal of right side of mandible as far as the left canine. Facial effect bad. Healing tissues distorted face. A. Appliances attached to maxillary and remaining mandibular teeth to conform healing tissues. B. Months after surgery and during use of artificial mandible.

PREFACE AT FORT MEADE

BOYCE A. BRAWLEY (Sophomore Class)

THE dental student of 1943 portrays the growing trend toward a military America. The majority of the students at the B.C.D.S. are now fulfilling their duties as soldiers in the Army of the United States under the Army Specialized Training Corps program. How these students became oriented under this new program is an interesting story, told in sweat and determination.

It was a hot July morning when we met at the Pennsylvania Station to board a train for Fort Meade. The boys were anxious and excited. We had been told to report at nine, but our train didn't arrive until eleven. During that two-hour wait, each fellow had his chance to express his personal views on what was to take place when we would arrive at camp. Needless to say, all were wrong! . . . On the way to Meade, the boys began to make up songs about the dentists similar to those sung by the Air Corps or other branches of the armed forces . . . When we arrived at the camp, *they* took us into the reception building where we were divided into companies. Having been assigned to barracks, we were sent through the mill of aptitude tests, mechanical tests, radio tests, and vaccinations for everything from typhoid to "how to become immune to Army life." . . . We were divided into two companies—the country club boys and the working boys. Those lucky students who were put in the former company were soon relieved of the very tiring tasks of marching, drilling, and the ever-popular "just standing around" in front of the orderly barrack . . . Probably no feature of the Army is more impressive than the famed K.P. One evening a group of us were told to report in front of the orderly barrack at

six-thirty properly clothed in fatigue suits. Now these fatigue suits aren't what *Esquire* would label as the most suitable clothing for the well dressed young man; but for the purpose of K.P., no other uniform could be more suitable, no other name more appropriate. *They* lined us up in double file, twelve strong, and marched us to an unknown destination. "Hut, two, three, four, hut, two, three, four"; that is the Army way of shuffling those size twelves issued for tender feet. Well, after a bit of marching here and there in the camp, six of us were dropped at the local mess hall. The mess sergeant took one look at us, and threw up his hands as if to express, "What have I done to deserve this?" We were given a detailed explanation of what was expected. Agreeing to the terms of our contract, we sat down to discuss our plight—over a few cases of nice fresh green beans. Now the ordinary method of snapping green beans is all right for the civilian, but in the Army you have a strict system to adhere to. First you take the bean in the left hand, holding it about the level of your belt and approximately six inches away from the body; then with the right hand you carefully break off the two ends of the bean, using the thumb and forefinger. Taking a careful look at the prepared product, you break the bean in three equal parts. The process seems pretty complicated at first, but after a few thousand beans, it becomes comparatively easy for the new recruit . . . It would be well to mention that there is probably no better way of getting to learn something about human nature than by snapping beans in an Army camp (with a group of dental students). A student who at other times has appeared to

be a quiet, reserved chap suddenly becomes an example of oratorical genius. Jokes, tall stories, and just plain lies begin to fill the air that is already saturated with the fragrance of garbage and fresh green beans. After the beans, *they* gave us a few thousand ears of corn to husk and clean; then, a few hundred heads of lettuce; and then, to end the evening's entertainment, a few cases of apples were thrust upon us—*they* wanted fruit salad, dental student style. In the meantime, however, a volunteer was called for to help with the garbage detail. No sight could be more amusing than that of a Maryland dental student and a Pennsylvania medical student bumping down the road on the back of a garbage detail truck. Yes, it was a far cry from dentistry or medicine, but it was all part of the training . . . By this time, we were beginning to feel like veterans of the Army. We had come, we had seen, and we had participated in the lowest and the highest forms of recruit training. Standing barrack duty from twelve to three in the morning, or from three to six; picking up bits of paper on the grounds that even the most microscopic eye could hardly detect; serving the food in the mess halls; scrubbing latrines at four forty-five in the morning; scrubbing barracks twice daily; washing pots and pans in the mess hall—all this and more too was part of the rigorous training the dental students experienced while in camp . . . But it wasn't the physical work that impressed the students; it was the attitudes of the superiors and those of his fellow students that made the most memorable impression. The average leader of a squad was

a nice chap; but, there were those who when given a bit of authority exercised it in a very unpleasant manner. Anyone with normal intelligence resents being cussed, but at camp most of us had to take some blasting without complaining. At the end of the orientation week, many were disgusted with it all, having been rushed and worked daily from 4:45 A.M. to 11:00 P.M. Through it all, the whole idea looked as if it would be a flop, but the dental students stuck with it and complained among themselves instead of to their superiors. Probably no happier moment was encountered than that when we were told that we were being returned to Baltimore. *They* marched us to the train in our G. I. clothes, carrying two big duffle bags heavily loaded with government equipment. By the time we arrived in Baltimore, we were a sad-looking bunch of soldiers, hardened by our few days in camp. There was very little said—the boys were quiet. *They* dismissed us and we returned to our respective homes in Baltimore . . . The following day, every one reported at the School, still a bit blue and very, very tired. This was our first chance to meet our commanding officers. It wasn't until this day that a spark of delightment came over the dental students. We were very much impressed by the attitude of these men, who treated us like gentlemen soldiers. The program is in its infant stage, and the students are still trying to adjust themselves to G. I. ways; but anyone visiting the School will be impressed with the way our future dentists are doing their best in aiding the war effort.

HYPOPLASIA OF HUMAN ENAMEL*

LT. KENNETH S. McATEE, DC, AUS

THE following is the case of a male patient, Edward C. Day, in whom I have taken particular interest. (Figs. A and B)

Through correspondence with Edward's mother, of Zakow, Che., China, I have received an accurate account of the family's history concerning the lesion.

The following is a resumé of Edward's dental history: Mrs. Day realized the importance of attempting to prevent "missing enamel" in her children. While Edward was yet unborn, Mrs. Day took double doses of phosphates and was under the care of a physician, who prescribed a proper diet for maintaining healthy bodies for the mother and the unborn child. After Edward's birth, the physician continued his special care of the child's diet. Mrs. Day remembers taking "loads of lime and orange juice."

When the first deciduous tooth erupted, the same factor of a dark tooth with no enamel appeared, just as it had occurred before in generations of the family. Then, as a precaution, Mrs. Day changed Edward's diet from condensed milk to fresh milk, thinking that might be a factor in the etiology; however, the other deciduous teeth were also defective on eruption. Mrs. Day's cousin, formerly Miss Edith Colson, who was non-affected, followed the same precautions, but she found that her children had the lesion too.

DESCRIPTION OF THE TEETH

When Edward Day presented at the Clinic, I noticed the worn appearance of his lower incisors. (Figs. A and B) He had had his upper teeth and several lower molars extracted some eight years ago and

now wore a full upper denture, with the lower edentulous spaces bridged. The lower incisors had been restored by mesio-inciso-distal inlays. Through correspondence with Dr. Brooks of Wooster, Ohio, I was able to obtain models (Figs. C, D and E) of the patient made before the extractions were performed.

Figure C gives the vertical relation of the patient's arches. The teeth, especially the anteriors, show marked wear due to attrition.

Figure D shows both wear of the teeth and condition of the enamel; especially is this true of the lower first molar region.

Figure E is a duplicate of the upper model except that the natural teeth have been placed on the model, as accurately as possible, to show the condition of the enamel of these teeth while in the arch.

In Figures D and E the upper anterior teeth can be seen to have no enamel on the incisal, which, as stated before, had been worn by attrition. The labial views show a layer of enamel which appears to be the thickness of half that of the normal tooth. The lingual surfaces of these teeth, as shown in Figure E, have only a thin, scaly coating of enamel. It is interesting to observe that no caries is evident in this group of teeth.

The upper bicuspid have only a thin layer of enamel on their crowns, as shown in Figure E and teeth 5 and 6 of Figure F. As in the aforementioned group of teeth, there is no evidence of caries, even though a great amount of the enamel has been lost and the dentin exposed.

In the upper molar region the occlusal surfaces are worn flat, with only remnants of enamel left in the fissures and grooves (Figures D and E). The upper-left first molar is worn so smooth that a high gloss

* A selection from the prize-winning thesis for March, 1943.

is present. The enamel on the buccal and lingual surfaces of the upper-left first and second molars is very thin—so thin that

it is not discernible in Figure E and tooth 7 of Figure F. However, the upper-right molars have enamel the thickness of which



FIGURE A: View of mandibular teeth exhibiting opalescent dentin.

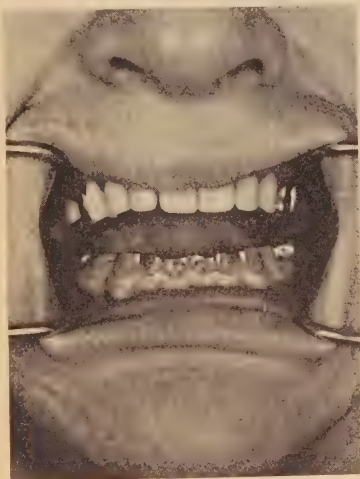


FIGURE B: Anterior view showing labial surfaces of lower incisors exhibiting opalescent dentin.

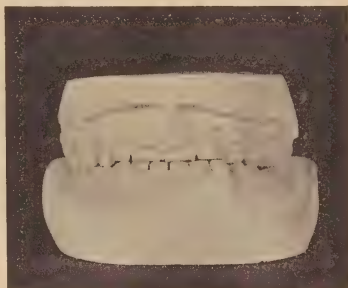


FIGURE C.: Occluding models showing the wear (the effect of attrition) on teeth having opalescent dentin.



FIGURE D: Models exhibiting the incisal occlusal surfaces of teeth having opalescent dentin.

approaches that of normal enamel although it is still not of a normal width. This feature is best seen in Figure F. The enamel has been marred somewhat in

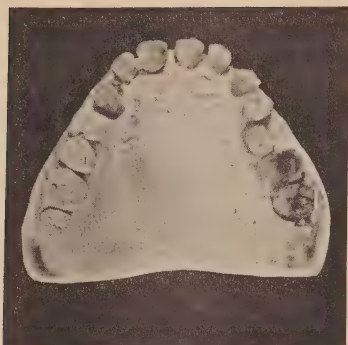


FIGURE E: Model (with natural teeth in place) showing the condition of the enamel of teeth having opalescent dentin.

appears less abnormal than that of the average tooth of this patient. However, it is not normal in its width and shows wear on the occlusal surface.

The lower molars vary in structure: The first molars (Figures D and F) appear more abnormal than any of Edward's other teeth. The former are worn almost even with the gum-line. They appear dark and carious; however, the caries do not have the consistency characteristic of normal carious teeth. The enamel present on these teeth is almost nil. On the other hand, the lower second molars (Figure D) have enamel which approaches normal. The patient has gold crowns on these teeth, thus making a diagnosis from



FIGURE F: Teeth having opalescent dentin.

handling, but enough remains to warrant correct observations. The upper molars were prone to occlusal cavities.

The anterior teeth of the lower jaw still remain in the patient's mouth; however, these teeth are restored with inlays, and all that remains is a thin layer of enamel on the labial surfaces.

The bicuspid in the lower jaw (Figures A, D and F, tooth 1), like the upper right molars, have a thin layer of enamel which

the model in Figure B a difficult task. An interesting factor is that of apparently normal third molars.

The dentin of these teeth, as a whole, appeared yellow and approached the color of a bone just devoided of its overlying tissues.

Microscopic Study:

Figure G is a low-power microscopical view of a hypoplastic lower bicuspid (Figure F, tooth 1). The enamel had

been destroyed for the most part. Of interest here are the hypoplastic dentin and a root canal that is practically obliterated because of attrition.

In Figure H is a low-power microscopical view of a lower molar (Figure F, tooth 2). Demonstrated here is a partial obliteration of the pulp chamber.



FIGURE G: Low-power microscopic view of a lower bicuspid (Tooth Number 1 in Figure F) exhibiting hereditary opalescent dentin.

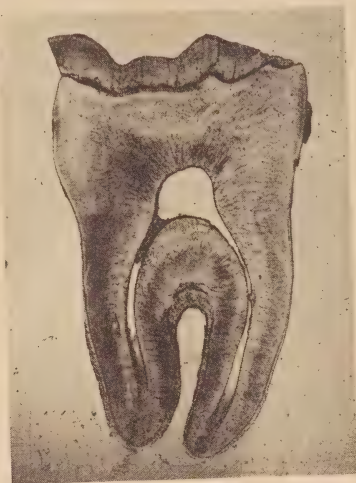
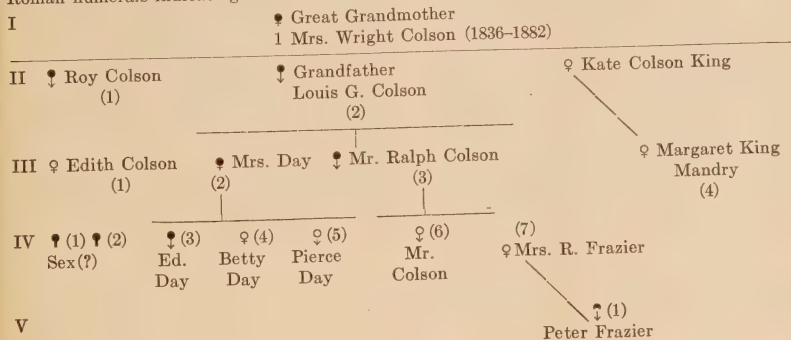


FIGURE H: Low-power microscopic view of a lower molar (Tooth Number 1 in Figure F) exhibiting hereditary opalescent dentin.

The diagram below is based on the most accurate data I have been able to obtain.

Roman numerals indicate generations



sister, Mrs. Kate Colson King, was not. Letters from Mrs. Augusta L. Colson, second wife of Louis G. Colson, tell of Edith Colson (Roy Colson's daughter) as not having similar lesions. The latter, whom I have not been able to question, had several children (sex unknown) who were affected by similar lesions.

Margaret King Mandry, daughter of Kate Colson King, now resides in India; I have received no information concerning her family, if any.

Mrs. Day stated that Pierce and Betty, siblings of Edward Day, have normal teeth.

Mrs. Robert Frazier, a cousin of Edward Day, has a son, Peter Frazier (10 months of age), who now has ten deciduous teeth affected by the lesions. This child is of the fifth generation of the family to be a victim of this condition.

INTERPRETATIONS

We are again perplexed with a problem of figuring with human specimens. Since human specimens reproduce so slowly and through time disappear from localities, we are somewhat at a disadvantage in attempting to prove the Mendelian principle.

From Edward C. Day's genealogy we cannot say there is a sex-linkage, as both sexes transmit the lesion; however, it is possible to make the following observations. (It must be remembered here that the sex of the two children of Edith Colson is unknown). The ratio of affected males to non-affected is 5:2, while that of females is 3:4. Thus, the ratio of affected males to females is 5:3 or 2:1, while that of non-affected males to females is 2:4 or 1:2. Therefore, from this observation

the males appear to be more prone to the lesion.

The reader must not be too critical of any views on the subject, since it must be remembered that this lesion from a hereditary standpoint has been traced as many as five generations only a few times. Thus, any conclusions drawn may be erroneous, but careful tracing of the lesion in those histories already started may prove in the future some sex-linkage.

CONCLUSION

Enamel hypoplasia is a dental manifestation of constitutional disturbance which affects the enamel increments of the deciduous and permanent teeth forming during a period of malnutrition, and indelibly indicates the time and duration of the disease period.

A chronologic analysis shows that most hypoplasia occurs before birth and during infancy, about one-third in early childhood and only a minute fraction in late childhood.

No specific condition can be designated as an etiological factor in enamel hypoplasia. There are many conditions which are believed to be causative factors because of the period in which teeth calcify. However, we should always be inquisitive about such conditions. Among the possible etiologic factors are rickets, febrile diseases, fluorosis, etc. It is interesting to note that more than half of the cases of hypoplasia of the enamel cannot be classified according to etiologic factors.

Heredity is a factor to be considered since diet and other possible health factors were watched in the case of Edward C. Day. The only conclusion to be drawn is that in the Day family, susceptibility to the lesion is hereditary.

STUDENT ACTIVITIES

FRESHMAN CLASS

THIS is the second class to enter under the accelerated program. Unlike the previous first-year classes, we have been forced to confine our activities to scholastic work with a minimum of social activity.

We have had a few changes in our faculty. Due to the death of Dr. Robert L. Mitchell, Professor of Bacteriology, Dr. Thomas C. Grubb has taken over the Bacteriology Department. The other departments have remained about the same.

On October 23, we had our Annual Class Dance at the Merchants' Club. The dance was planned and carried out by the Dance Committee: M. J. Jurkiewicz, Bellows Falls, Vt.; W. J. Krumbeck, Nutley, N. J.; H. M. Mackler, Springfield, Mass.; E. M. Nelson, Providence, R. I.

Under the Army and Navy training program we have fifty men in the Army Specialized Training Unit and nine men in the Navy V-12 Unit. Only six men have remained civilians. It has been hard to keep up with the school work and military training, but we feel that after this year's work is completed, our worst is behind us ("gas" from the Sophomores).

There are five married men in the class: W. P. Neumann, J. F. Diliberto, C. H. Sheetz, B. R. Delorme and F. P. Petuskis.

President: W. P. Neumann, Bethany, Conn.

Vice-President: F. A. Kiernan, Stratford, Conn.

Secretary: C. T. Calderon, San Juan, P. R.

Treasurer: M. H. Caster, Boston, Mass.

Historian: A. B. Liftig, Hartford, Conn.

SOPHOMORE CLASS

After being "gassed" for one year, only sixty-three sophomores remain out of the entering class of seventy-seven. Very little social activity has taken place during the school year. On October 16, the annual class dance was held at the Merchants' Club under the direction of Albert Grant and Abner Rowe.

When the Army and Navy took over the school, the class was broken as follows: 50 in the Army Specialized Training program, 11 in the Navy V-7S Training Program, 2 Civilians.

Only one member of the class has taken any steps toward marriage. On September 4, 1943, Leon Mazzotta was married to Miss Dolores Mores of Baltimore. He now joins the ranks of "married professional students".

Our class has the distinction of being the first class to enter the B.C.D.S. under the accelerated program. It has truly served as a guinea pig for the program and has admirably proved that students "can take it" even under the strain of the "speed-up" program.

President: Joseph Summa, Waterbury, Conn.

Vice-President: George Mazur, Bridgeport, Conn.

Treasurer: Albert Dunn, New Britain, Conn.

Secretary: John Cadden, Baltimore.

Historian: Louis Wiseman, Dover, N. H.

Sergeant-at-Arms: Ernest Nardone, Westerly, R. I.

Student Representative: Robert George, Mt. Airy, N. C.

JUNIOR CLASS

The long awaited desire for white gowns has arrived—we are among the "upper

crust" on the clinic floor now. However, all is not so glamorous as we had anticipated, for now new worries have been thrown upon us. Points, points—we even dream of points!—Sharpen your point angle; use your chisels; don't use too much pressure with your gold mallet!—Yes, the clinic floor has had its effect upon us.

Among the many changes made in our class, matrimony has probably been one of the most impressive contributors. The benedicts are Abrams, Shapiro, Applegate, Inman, Kellam, Morini, Knowlton, Radler and Weiner.

A great tragedy befell our class with the untimely loss of one of our outstanding classmates, David Shapiro. This has been a loss too great to be expressed in words. All of us have felt his absence.

The Junior Dance was very well planned and conducted by Olsen, Pfeifer, Abrams, Dosh, Rockoff, Applegate, Borg, Smith and Lavine.

President: Francis W. Ostrowski.

Vice-President: Elliott Perlman.

Secretary: Donald Rogers.

Treasurer: George Graham.

Historian: William Blumenfeld.

Sergeant-at-Arms: Joseph Massucco.

SENIOR CLASS

Our class is composed of 27 men on active duty in the Army, 17 on active duty in the Naval Reserve, 5 inactive in the Naval Reserve, and 26 inactive in the Army.

Fourteen men are married, 8 are engaged; at least two are expecting "junior" in the near future.

The senior class dance was held at the Belvedere Hotel, Saturday night, October 9. The dance committee of Walt Stillwell, Chairman, Mort Samet, Caryl Adams and Lee Horwitz did an excellent job.

President: Raymond Kent Tongue, Jr., Baltimore.

Vice-President: Robert Harvey Bernert, West Hartford, Conn.

Secretary: Walter Brooks Stillwell, Jr., Savannah, Ga.

Treasurer: Leon Joseph Horwitz, New York.

Historian: Stanley Herbert Karesh, Charleston, S. C.

Sergeant-at-Arms: John Robert Famulari, Jr., Brooklyn, N. Y.

SIGMA EPSILON DELTA

The entry of the members into the Army and Navy was marked by an extremely successful beerfest. The chapter roster lists 19 in the Army and 6 in the Navy. Several others are on inactive duty. The scene of the beer party, the fraternity house, which some of us call "the ship" and others "the barracks", has taken on a truly military air.

The athletic committee has done well in keeping our "fighting men" in trim. Reports from the coach have it that a successful record was chalked up. Our educational activities, in the meantime, have not lagged behind. During the spring season the following lectures were given at the house by undergraduate fraters:

"The Dental Hygienist", Arnold H. Castaline.

"Industrial Dentistry", Stanley Weinberg.

"Fluorides in Dentistry", Melvin Luxenberg.

"Dental Manifestations of Acromegaly", S. Pruzansky.

Some of these talks were illustrated by charts, photographs, and lantern slides.

During the winter a program of films on surgery will be presented. The first of the series, "Regional Anesthesia", a motion picture in technicolor, has already been shown. It is our plan to acquaint all those who are interested with the

variety of problems which the dentist may meet in military service. The interest shown in these activities by the students and the faculty has been gratifying.

Master: A. J. Selman.

Chaplain: A. H. Castaline.

Scribe: A. Jackson.

Treasurer: S. Weinberg.

Historian: S. Pruzansky.

Inner Guard: J. M. Cohen.

Outer Guard: H. E. Alson.

PSI OMEGA, ALPHA CHAPTER

Despite the war and all the changes it has brought about, Alpha chapter of Psi Omega fraternity has continued to function in almost normal fashion. In fact, Army and Navy life has been so agreeable to several of our members that they decided to take a wife to share it with them. Brothers Applegate, Mazzotta and Inman recently led brides to the altar.

At our last initiation the following men became members: A. Benavent, N. Bianco, B. Brawley, C. Catani, F. Celestino, L. Church, J. Cicala, H. Dressel, F. Feindt, R. George, J. Gorski, A. Grant, R. Long, M. Macek, W. Marano, L. Mazzotta, J. McWilliams, J. O'Hearn, A. Quinones, A. Rowe, J. Summa, R. Voorhees and C. White. With a great deal of pride we welcome this fine group of fellows into our chapter.

Recently the following were elected to office:

Grand Master: Bill Applegate.

Junior Grand Master: Charles White.

Treasurer: Daniel Savini.

Secretary: Francis Ostrowski.

Chaplain: Boyce Brawley.

Chief Inquisitor: Joseph Massucco.

Senator: Joseph Summa.

Inside Guardian: Arturo Benavent.

Outside Guardian: Abner Rowe.

Historian: Carl Catani.

Editor: Ed Pfeifer.

Chief Interrogator: Joseph Cicala.

Our social activities have suffered little because of existing conditions. Several fine parties were held at the house in recent months. The big event of the year, the dinner-dance, was held on November 6.

Soft-ball has offered most of the recreation for our members. Manager Joe Massucco finally struck a winning combination and our team did themselves proud in the final month of the league at the School. We all wish Brother Petti, who broke his arm during the final game of the season, a speedy recovery.

We close with a parting wish to our graduating seniors. Wherever you go, whatever you do, may success, happiness and good fortune be yours.

XI PSI PHI, ETA CHAPTER

The social event of the year for Xi Psi Phi occurred on November 20 at the Emerson Hotel. This was the annual dinner-dance given in honor of our Seniors.

During the year, two of our brothers have joined the ranks of the happily-wed. They are Mel Beaumont and Ray Goddu.

There are rumors that two of the brothers, Fred Beerbower and Bob Gibson, are expecting a graduation gift by "stork-mail".

President: Harry Borg, Peekskill, N. Y.

Vice-President: Charles Hennesey, Jersey City, N. J.

Secretary: Bruce Mathias, Waynesboro, Pa.

Treasurer: Raymond Goddu, Holyoke, Mass.

Editor: Frank Gilley, Southwest Harbor, Maine.

Director: James Trone, Elkton, Md.

Chief Herald: Paul Noerr, Delta, Pa.

ALPHA OMEGA, ZETA MU CHAPTER

The chapter has run the gamut of emotion this year; joy and sorrow have

been experienced by all of us. We entered the student training program with a sense of relief; a relief that comes from a banishment of doubt and uncertainty. We are now the wards, so to speak, of the United States Government. Our obligations, small as they may be, are being fulfilled with an appreciative pleasure.

On July 13, 1943 the fraternity lost a beloved frater by the death of David Shapiro. Words are inadequate for a fitting tribute to Dave. Respected and admired by his fraternity brothers and classmates alike, his loss has been deeply felt by all. He will never be forgotten. Future Alpha Omegans will remember him through the dedication of the David Shapiro Room at the House.

President: Harold Bulitt.

Vice-President: Gene Moskowitz.

Secretary: Henry Gillers.

Treasurer: George Mazur.

Historian: Alvin Aisenberg.

Sergeants-at-Arms: Bernard Wilkins,
Walter Lavine.

GORGAS ODONTOLOGICAL SOCIETY

The activities of the Gorgas Odontological Society have been somewhat inhibited this past year because of the Army and Navy programs, and also by the many other impacts of the war.

Nevertheless, the initiative and high standards of the Gorgas Odontological Society maintained in the past have still been carried on by the diligent and enthusiastic members of the Society.

Last June a dance was held at the Lorc Baltimore to initiate the new members. The dance was highly successful; yet there was a different atmosphere from that experienced at previous Gorgas affairs. The dance was entirely informal. For the first time in a long while an initiation was held without a formal dinner.

During the course of the year, Dr. Inman presented a very interesting paper on the "Administration of Vinyl Ether". The lecture was very well received.

It seems as if the need for a "New Deal" has finally overtaken the conservative members of the past. The Gorgas certificate presented to seniors at successful completion of their student career has finally undergone revision. The new edition is an improvement over the old; however, the traditional features have been retained.

The dinner-dance held at the Merchants' Club on November 13 was very well attended and enjoyed. However, the scenery was very much different from that characteristic of previous Gorgas dances. Instead of guests in evening gowns and members in tails we saw the backbone of our nation—the Army and Navy men—escorting their charming dates.

President: Ed Vandegrift.

Vice-President: Herbert Fine.

Secretary: Gus Machen.

Treasurer: Leonard Quitt.

Sergeant-at-Arms: Felix Trommer.

Historian: Joseph L. Berkeley.

In Memoriam

Robert Lewis Mitchell, Phar.D., M.D.

After apparent recovery from an operation, Dr. Mitchell had a relapse that ended in his death on December 13, 1942. With his passing the students and the alumni of the B.C.D.S. suffered the loss of an excellent teacher and highly valued friend.

Dr. Mitchell was born on June 25, 1881, in Elkton, Maryland. After his early education in the public schools, he attended Delaware College. Desiring a professional education he transferred to the Baltimore College of Pharmacy, from which he graduated in 1902. He then proceeded to realize his childhood ambition to become a physician by entering the University of Maryland Medical School. He received his M.D. degree in 1905. Soon after he had established a practice in Baltimore, Dr. Mitchell was invited, in 1910, to join the faculty of the B.C.D.S. He later was promoted to the full professorship in Bacteriology and Pathology, remaining in this position until his illness.

Among his professional activities, Dr. Mitchell was a member of the Baltimore City Medical Society, the American Chirurgical Faculty, the American Medical Association, and the Southern Medical Society. Dr. Mitchell was a member of the staff of the Maryland General Hospital. He was also an active member of the Boumi Temple of the Shrine, Sons of the American Revolution, and the Society of the War of 1812. He was a member of the M Club, having been Captain of the Maryland football team of 1902.

Dr. Mitchell is survived by his wife, the former Annie Inskip Smith; a daughter, Miss Nancy Smith Mitchell; and a son, Dr. William Arthur Mitchell. Another son, Robert L. Mitchell, Jr., died in 1934.

The Class of 1937 dedicated the *Mirror* to Dr. Mitchell: "For what he is and for what he has done; for his personality and for the inspiration that he affords us; for his gentlemanly qualities; for his honesty and sincerity; for his kindly interest in others; we dedicate this book to our friend and teacher."

ALUMNI NEWS

XI PSI PHI ALUMNI

BECAUSE of the conditions imposed by the gas-rationing program the Alumni Chapter of Xi Psi Phi has decided to remain inactive until the present restrictions shall have been removed. The Women's Club is also inactivated. However, the fraternity house at 1829 Bolton Street is still being maintained as student living quarters and as a gathering place for visiting Zips.

SIGMA EPSILON DELTA

Because of the loss of many of its members to the armed forces the graduate chapter has been confronted with the problem of maintaining its essential activities. We who must remain at home are doing our best to keep up the spirit and interest of the chapter. We have had to curtail our scientific meetings because of the insufficiency of time available to clinicians. However, our social meetings have been up to pre-war standards. In order to keep our meetings informal we have held them at the homes of various members.

On February 27 the chapter joined the undergraduates at a splendid dinner and dance held at the Merchants' Club. The graduate group presented Brother Rostov with a gift in honor of his election as Grand Master.

The chapter instituted this year the custom of awarding a Plaque of Merit to the member of the undergraduate chapter who achieves the highest scholastic rank within the group. The first recipient of the award was David B. Scott of the March, 1943 class.

PSI OMEGA ALUMNI

Although the Oriole Alumni Chapter has experienced a severe reduction in

membership because of the absence of a large number of members in the service of their country, the members in civilian practice have continued to hold regular monthly luncheon meetings at the House.

Grand Master: L. W. Bimestefer.

Junior Grand Master: W. Buckley Clemson.

Secretary: A. W. Gregory.

Treasurer: O. C. Joyce.

Editor: R. E. Hampson.

THE WOMEN OF PSI OMEGA

The Women of Psi Omega have decided to continue their meetings, although the organization officially will not be normally active during the duration. Once each month the members meet for lunch and a brief business meeting.

President: Mrs. Thomas Hartley.

Vice-President: Mrs. Harry McCarthy.

Secretary: Mrs. Dave Danforth.

Treasurer: Miss Katharine Toomey.

Members of the Board: Mrs. J. T. Nelson, Mrs. T. R. Manakee, Mrs. W. B. Inman, Mrs. C. L. Inman.

ALPHA OMEGA ALUMNI

Like other organizations, we have suffered severely in the loss of active members. The situation has demanded that we treble our efforts in order to maintain activities on our usual schedule. To date our programs have been full.

Chancellor: Nathan Perry.

Chancellor-Elect: David Willer.

Scribe: Elmer Hoffman.

Quaestor: Leonard Hirschman.

Editor: Emanuel Hoffman.

Macer: Jesse Trager.

PERSONALS

Dr. Philip Lee Chmar '41 married Mollie Millner on August 9, 1942.

Dr. Alvin Henry Savage '42 married Rose Eleanor Lefkowitz on August 23, 1942.

Lt. Jacob R. Cohen '31 married Mollie Wenger on August 22, 1942.

Dr. Donald Tiemeyer Frey '41 married Helen Virginia Harrison on October 24, 1942.

Dr. Ardie William Gregory '26 married Marie Elizabeth Hart on October 8, 1942.

Dr. Edward C. Dobbs '29 married Sally Ramey on January 16, 1943.

Dr. Howard G. Weiss '42 married Adele Robinson on October 25, 1942.

Lt. Riley Eugene Spoon, Jr. '43 married Lillian Fay Chandler on April 7, 1943.

Dr. Earl Christian Hewitt '41 married Catherine Rosser Martin on February 6, 1943.

Dr. John Pershing Blevins '43 married Charlotte Bernhardt Shaull on May 1, 1943.

Lt. Frank Jackson Bryce '43 married LaRue Thomas on March 31, 1943.

Dr. Willard Theodore Green '43 married Helena May Townshend on May 29, 1943.

Lt. (j. g.) William Albert Aldridge '42 married Josephine Vera Harne on July 1, 1943.

Lt. Raymond William Gillespie '34 married Mary Kathryn Brosnan on October 18, 1943.

Captain and Mrs. Jules Kaswick '40 announce the birth of a daughter, Karen, on October 8, 1942.

Dr. and Mrs. Irving Eichenbaum '39 announce the birth of a son, Daniel Michael, on November 12, 1942.

Dr. and Mrs. Harold Plaster '39 announce the birth of a son, Harold, Jr., on January 2, 1943.

Dr. and Mrs. Kenneth V. Randolph '39 announce the birth of a daughter, Janice Lee, on March 23, 1943.

Captain and Mrs. Gordon S. Pugh

'37 announce the birth of a daughter, Cynthia Gordon, on March 1, 1943.

Dr. and Mrs. Albert T. Clewlow '37 announce the birth of a daughter, Emily Winifred, on January 16, 1943.

Dr. and Mrs. Riley Seth Williamson, Jr. '42 announce the birth of a son, Riley Seth, III, on March 12, 1943.

Dr. and Mrs. Robert Lanning Betts '41 announce the birth of a son, Robert Alwin, on March 6, 1943.

Dr. and Mrs. Richard Richardson '37 announce the birth of a daughter, Liles Louise, on August 5, 1943.

Lt. (j. g.) and Mrs. Frank J. Roh '37 announce the birth of a daughter, Frances Carolyn, on September 28, 1943.

Dr. and Mrs. Milton Snell Wilkinson '43 announce the birth of a daughter, Kathleen Virginia, on October 20, 1943.

Dr. and Mrs. Leonard J. Tolley '41 announce the birth of a son, Leonard Charles, on October 20, 1943.

OBITUARY

Dr. Edward Deichmann, Jr (B.C.D.S. 1903) of Baltimore died August 19, 1942.

Dr. C. Maurice Peabody (B.C.D.S. 1901) of South Orange, New Jersey, died January 5, 1942.

Dr. Perry M. Fitch (U. of Md. 1903) of St. Johnsbury, Vermont, died June 30, 1942.

Dr. A. H. Kendall (U. of Md. 1917) of Miami, Florida, died July 23, 1942.

W. M. Hollinsworth (B.C.D.S. 1914) of Mt. Airy, North Carolina, died in August 1942.

Dr. Frederick F. Drew (B.C.D.S. 1875) of Baltimore died October 26, 1942.

Dr. John D. Leahy (U. of Md. 1910) of Portsmouth, New Hampshire, died July 29, 1942.

Dr. John M. Parker, (B.C.D.S. 1888) of Asheville, North Carolina, died January 24, 1943.

Dr. Jos. N. Carriere (U. of Md. 1902) of Fitchburg, Massachusetts, died December 11, 1942.

Dr. Clyde M. McKelvey (U. of Md. 1891) of Harrisburg, Pennsylvania, died January 29, 1943.

Dr. Stanley Willard Webb (B.C.D.S. 1907) of Baltimore died February 21, 1943.

Dr. Walter G. Bush (U. of Md. 1905) of Poughkeepsie, New York, died February 18, 1943.

Dr. Samuel B. Foster, (B.C.D.S. 1900) of Los Angeles, California, died February 9, 1943.

Dr. Clifton B. Doane (B.C.D.S. 1921) of Troy, Pennsylvania, died December 27, 1942.

Dr. Robert I. Robertson (B.C.D.S. 1892) of New Brunswick, Canada, died in July 1942.

Dr. David B. Snively (U. of Md. 1888) of Waynesboro, Pennsylvania, died August 28, 1941.

Dr. Norman J. Roberts (B.C.D.S. 1882) of Waukegan, Illinois, died June 24, 1940.

Dr. Edward L. Munroe (B.C.D.S.

1897) of Jacksonville, Florida, died November 13, 1939.

Dr. Noah L. Morin (B.C.D.S. 1915) of Fall River, Massachusetts, died in April 1943.

Dr. John F. Cleveland (B.C.D.S. 1909) of Beverly, Massachusetts, died December 24, 1941.

Dr. Oliver B. Wright (U. of Md. 1901) of Montgomery, Alabama, died in December 1942.

Dr. Wallace D. Gibbs (U. of Md. 1914) of Charlotte, North Carolina, died July 22, 1943.

Dr. Walter R. Merriam (B.C.D.S. 1905) of Baltimore died July 29, 1943.

Dr. John J. Brominski (B.C.D.S. 1920) of Wilkes-Barre, Pennsylvania, died in November 1943.

Dr. Samuel E. Beecher (B.C.D.S. 1891) of Chicago, Illinois, died June 6, 1943.

Dr. Bennett Gray (U. of Md. 1908) of Perth Amboy, New Jersey, died September 13, 1943.

Dr. Cyrus Kurtz (U. of Md. 1899) of Paterson, New Jersey, died July 24, 1943.

ALMANAC DENTISTRY

Collected by

ALBERT LOEWENSON (Senior)

REMEDY FOR THE TOOTH-ACHE.—A sheet of writing-paper, burned in a clean white plate, will produce a yellowish oil, which oil is to be soaked up by a small piece of clean cotton, and placed in or about the tooth affected for twelve or fifteen minutes. In the most distressing cases, says a Correspondent, I have known it to give immediate relief. One of which happened last week in a Mrs. F——, who for more than three months had been almost tormented by the pain. When by applying the oil of paper, she had immediate relief. I never knew a case where a repetition was necessary.

The Washington Almanac, 1818 (Baltimore)

TO CLEAN THE TEETH AND GUMS.—Take an ounce of myrrh in fine powder, two spoonful of the best white honey, and a little green sage, in very fine powder. Mix them well together, and wet the teeth and gums, with a little of it every night and morning, this prescription will make the flesh grow close to the teeth, and the root of the enamel.

The American Farmer's Almanac, 1855 (Baltimore)

CURE FOR THE TOOTHACHE.—Those of our readers who have writhed and groaned under the torture of an aching tooth, will, we doubt not, read with pleasure the following "sure cure," which we copy from an exchange paper: "Get a kettle of water—let it come to a boil, then put your head into it and let simmer for precisely half an hour; take out your head and shake all your teeth into a heap; pick out the decayed ones and throw them away. The sound ones you can put back again."

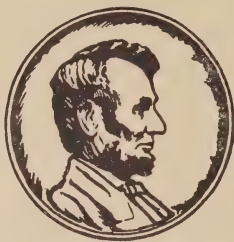
The Farmer's and Family Almanac, 1857 (Baltimore)

TEETH.—To preserve the teeth, brush them gently mornings and evenings with a tooth-brush and lukewarm water. Should the gums bleed slightly by brushing, it will be a good effect. To permit tartar to settle on teeth, proves ruinous. A little prepared chalk, orris-root and magnesia, mixed is a good dentrifice and may be used occasionally. Common strawberries, in a ripe state, rubbed on teeth and gums, sweetens the breath, and become more efficacious in eating them freely. Teeth that are once clean, can be kept so by simply using water and a brush.

The Hagerstown Town and Country Almanac, 1846

REMEDY FOR THE TOOTH-ACHE.—Put a piece of unslacked lime about the size of a walnut, in a quart bottle of water, and keep it corked, cleanse the teeth with the brush every morning, using the water, and rinse the mouth with it after dinner and tea. If the water is too strongly impregnated with lime, dilute it. This practice will not only prevent the tooth-ache, but will preserve the teeth.

The Citizens' and Farmers' New Town and Country Almanac, 1832



*We are (justifiably) proud
of our record of*

HONEST DEALINGS

Our business has been built over a long period of years—years of pleasurable dealings with the dental profession. There is no secret about our success. It is built along firm lines—our long established policy of honest dealings.

We have always realized that, as your dental dealer, you have placed your faith in our judgment and reliability. This faith we appreciate, and will never violate it knowingly.

Please accept our thanks for your continued confidence.

THE L. D. CAULK COMPANY

Hart & Stoetzer

N.E. Cor. Park Ave. & Centre St.

BALTIMORE, MD.

THE
LUTHER B. BENTON COMPANY

BALTIMORE'S MOST MODERN DENTAL DEPOT

709-11 N. Howard Street

(established 1856)



WE STOCK A COMPLETE LINE
OF EQUIPMENT AND SUPPLIES



Why not call
"Benton's"
Vernon 8512-3-4

FRANK W. TAYLOR
College Representative

The House of Tomorrow

★

C H A R L E S N O S & Y E L D

★

★

★

At Your Service Today

(In writing to advertisers, please mention the journal—it helps.)



A Great Variety of

COLUMBIA DENTOFORMS

Models With All Teeth Fixed
Models With All Teeth Removable
Full-Jaw and Half-Jaw Partial
Edentulous Models

Orthodontic Models
Deciduous Models
Model Base Formers
Rubber Dentoform Molds

Enlarged Models and Many Special Models



If it's a model for student technic or teaching . . .
We have it—or probably can make it



SIXTEEN-PAGE ILLUSTRATED PRICE LIST SENT ON REQUEST

Columbia Dentoform Corporation

"The House of a Thousand Models"

131 EAST 23RD STREET

NEW YORK 10, N. Y.

ALMANAC DENTISTRY

Collected by

ALBERT LOEWENSON (Senior)

Cure for the Tooth-Ache.—At a recent meeting of the London Medical Society, Dr. Blake stated, that the extraction of teeth was unnecessary. He was enabled, he said, to cure the most desperate case of tooth ache (unless the disease was connected with rheumatism), by the application of the following remedy to the diseased tooth: "Alum reduced to an impalpable powder, two drachms; nitrous spirit of a ether, seven drachms: mix and apply them to the tooth."

Matchett's Annual Almanac for 1831 (Baltimore)

A Natural Dentifrice.—The common strawberry is a natural dentifrice, and its juices, without any preparation, dissolves the calcareous incrustations on the teeth, and makes the breath sweet and agreeable.

Fisher's Improved House-Keeper's Almanac, 1857 (Baltimore)

Care of the Teeth.—Our teeth decay; hence unseemly mouths, bad breath, imperfect mastication. Everybody regrets it. What is the cause? I reply, Want of cleanliness. A clean tooth never decays. The mouth is a warm place—ninety-eight degrees. Particles of meat between the teeth soon decompose. Gums and teeth must suffer. Perfect cleanliness will preserve the teeth to old age. How shall it be secured? Use a quill pick, and rinse the mouth after eating. Brush and castile soap every morning; the brush with simple water on going to bed. Bestow this trifling care upon your precious teeth, and you will keep them and ruin the dentists. Neglect it and you will be sorry all your lives. Children forget, watch them. The first teeth determine the character of the second set. Give them equal care.

The Old Farmer's Almanac, 1873

Jaw Ache.—Take a dose of salts and apply a warm poultice of hops and vinegar to the part.—Steaming the part with the vapor of vinegar, and keeping the body covered at the same time with blankets, till a perspiration comes on, is also very effectual.

Turner's Improved House-Keeper's Almanac, 1846

A Radical Cure for the Tooth Ache.—Use as a tooth powder the Spanish snuff called Sibella, and it will clean the teeth as well as any other powder, and totally prevent the tooth ache; and make a regular practice of washing behind the ears with cold water every morning; the remedy is infallible.

American Farmer's Almanac, 1827

Common Gargle.—Take of rose-water, six ounces; syrup of clove July flowers, half an ounce; spirit of vitriol, a sufficient quantity to give it an agreeable sharpness. Mix them.

This gargle, besides cleansing the tongue and fauces, acts as a gentle repellent, and will sometimes remove a slight quinsy.

The Pennsylvania, Delaware, Maryland, and Virginia Almanack, 1786





THE Journal

OF THE
BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND



ANOTHER WARTIME COMMENCEMENT	49
THE IMMORTAL WELLS	51
ALUMNI HONOR ROLL: ADDITIONS	52
PROMOTIONS	57
THEORIES OF TOOTH ERUPTION	59
A CLASS TO BE REMEMBERED	67
THE ADMIRAL'S BRIDGE	71
WILLIAM B. FEINDT '39	76
B.C.D.S. SERVICE NOTES	78
ALUMNI NEWS	85

LIBRARY
BALTIMORE COLLEGE OF
DENTAL SURGERY

VOLUME 8

November, 1944

NUMBER 2

THE *Journal*

OF THE

BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND

VOL. 8

No. 2

EDITORIAL STAFF

Editor

GARDNER P. H. FOLEY

Alumni Editor

DORSEY R. TIPTON

Business Manager

B. A. DABROWSKI

Advisory Board

GEORGE M. ANDERSON

BURT B. IDE

J. BEN ROBINSON

Student Staff

BOYCE BRAWLEY, Senior, Chairman

R. GIGLIOTTI, Senior

J. F. DILIBERTO, Junior

M. H. COLECCHI, Junior

N. D. BOOKSTAVEN, Sophomore

The Journal of the Baltimore College of Dental Surgery is published irregularly by the Faculty, the Students and the National Alumni Association of the Baltimore College of Dental Surgery, Dental School, University of Maryland; and the Grieves Library Foundation of the Maryland State Dental Association.

Made in United States of America

ANOTHER WARTIME COMMENCEMENT

FOR many reasons, most of them resulting from conditions imposed by the war, the JOURNAL was not published between September, 1942 and December, 1943. This account of the November 1943 Commencement, tardy in publication, should be regarded not as a news item but as an element of School history that deserves recording for its future value.

OMICRON KAPPA UPSILON

The convocation of Phi Chapter was held on Saturday evening, November 27. The honorary member inducted at the meeting was Major General Robert H. Mills '07, who was presented by Dean Robinson. The new members from the graduating class were presented by Dr. James Pyott '26: Edward Vandegrift, Greensboro Md.; Caryl Adams, Bennington, Vt.; Roy Sloat, Jacksonville, Fla.; Wilbur Ramsey, Lutherville, Md.; Morton Hollander, Baltimore; Herbert Young, Hastings, W. Va.; William Bisgeier, East Orange, N. J.; Edward Biczak, Lodi, N. J.; Jerome Kaye, Brooklyn, N. Y.

THE SENIOR AWARDS

University Gold Medal for Scholarship: Edward Vandegrift.

Certificates of Honor: Edward Vandegrift (Magna Cum Laude), Caryl Adams (Cum Laude), Roy Sloat, Wilbur Ramsey, Morton Hollander, Herbert Young.

Isaac H. Davis Memorial Medal for Cohesive Gold Filling: Roy Sloat.

Albert S. Loewenson Memorial Medal for Full Mouth Operative Restoration: Roy Sloat. Honorable Mention: Stanley Karesh, Charleston, S. C.

Alex H. Paterson Medal for Practical Set of Full Upper and Lower Dentures: Edward Vandegrift. Honorable Mention: George Richman, New Britain, Conn.

Harry E. Kelsey Award for Professional Demeanor: Caryl Adams.

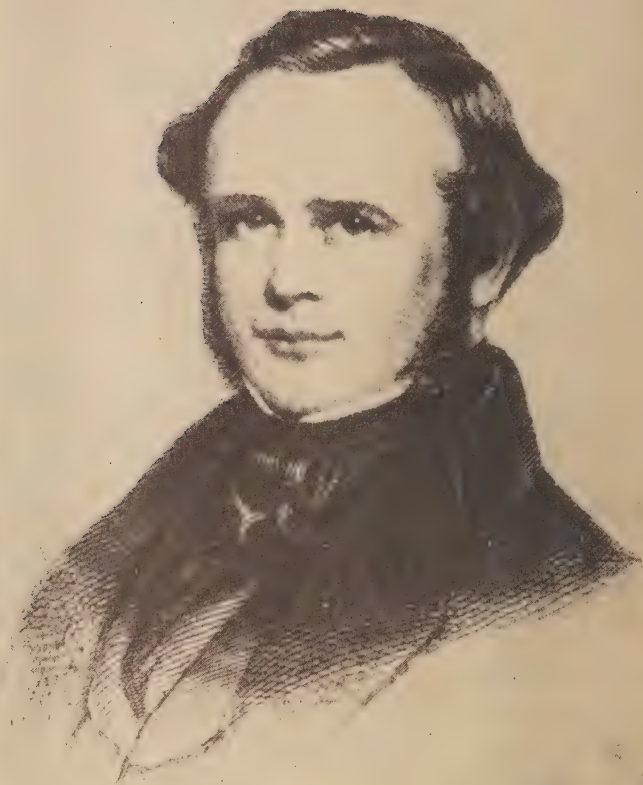
Alumni Association Gold Medal for Thesis: Wilbur Ramsey. Honorable Mention: Stanley Lipman, Brooklyn, N. Y.

Award (Contributed by Dr. James H. Samuel '14) for Best Paper in Dental History: Edward Biczak.

Award (Contributed by Major Edgar J. Jacques '17) for Meritorious Work in Practical Oral Surgery: Felix Trommer, Norwich, Conn.

Certificate for Outstanding Work in Practical Pedodontia (American Society of Dentistry for Children): Felix Trommer.

Keys Awarded for Meritorious Work on the *Mirror*: Morton Hollander; Stanley Karesh; George Richman; Walter Stillwell, Flushing, N. Y.; Stanley Auerbach, Brooklyn, N. Y.; Wilbur Ramsey; Bernard Lavine, Trenton, N. J.; Fred Witzburg, Newark, N. J.



Horace Wells

A TRIBUTE TO THE IMMORTAL WELLS

MARIO H. COLECCHI (Junior)

(Selected from a paper submitted in partial fulfillment of the course in Written and Oral Expression)

The case of Horace Wells is now before us. Today, throughout the civilized world, he is the acknowledged discoverer of anesthesia and his name is listed in the bright galaxy of great benefactors of mankind. Imposture cannot be permitted to usurp the place of merit; ignorance and presumption cannot overtop the emanations of true genius, and all the promptings of a generous, noble, self-sacrificing spirit; artifice, chicanery, and mendacity cannot stand before sincerity, rectitude, truth, and honor. The old adage "It is better late than never" applies most happily to the appreciation the dental world and mankind in general have indicated in their regard for Horace Wells.

It has been an old story, it will be a tale of every age, and quite likely it is part of the rough and rugged road that all new thoughts, all new departures, all new discoveries, all new inventions must travel. It was also thus with the work of the great Horace Wells, who found little comfort after he had discovered anesthesia. His trials began the day when, by his own sacrifice, he demonstrated that human science could master and control pain. He was ridiculed, publicly humiliated, and ignored by many of his profession as one who was trifling with the supernatural, and classed with the empirics. Others, who faintly appreciated the greatness of his discovery, hoped to rob him of his credit, and daily he was tortured by the unkind and slanderous comments made of both himself and his new discovery.

He died, uncomforted by the profession he loved and honored. A gift thus bestowed upon humanity was so wonderful, so priceless that had pagan Greece or Rome been so beholden to a man, he would have been elevated by the esteem of a grateful populace to the rank of a beneficent deity. Temples would have been graced with his statues, and incense burned to signalize the great benefaction.

His death awakened the populace to his great contribution. In this, the one-hundredth year of his discovery, the work of Wells lives on in everlasting tribute to his great vision. Tablets have been unveiled, statues have been erected, resolutions and tributes have been recorded, and praises sung for this dentist who so bountifully deserved the good will and the earnest plaudits of a grateful world.

HONOR ROLL OF ALUMNI IN ACTIVE SERVICE

The Honor Roll now lists 595 alumni who are serving their country. The last issue of the JOURNAL (December 1943) contained 447 names; this issue, 148. Knowledge concerning our men in the services comes to us from several hundred sources. Now and then we receive direct information through letters or visits; often an alumnus writes or tells us about the locations and the ranks of several graduates, usually his classmates. Rarely do we receive news from the Public Relations offices. The presentation of the Honor Roll is the result of a great deal of hard work in gathering and organizing the material submitted to the editor. Miss Elizabeth Disney and Miss Margaret Disney, secretaries in the School Office, have been ineffably helpful in the preparation of both the December and the October lists.

(Additions to the list published in the JOURNAL of December, 1943)

1912

Col. Robert L. Strickland, Base Dental Clinic, MacDill Field, Tampa, Florida.

1922

Lt. Com. Ronald C. Dove, DC-V(S), USNR, Naval Training Center, Sampson, New York.

1925

Lt. J. L. Alpert, USNR, U. S. Naval Receiving Station, Boston, Massachusetts.

Lt. Com. Daniel F. Lynch, USNR, Naval Hospital, San Diego, California.

Lt. F. B. Shinn, Dental Clinic #2, Naval Training Station, Newport, Rhode Island.

1927

Capt. Richard C. Orrison, U.S.A.

1929

Lt. Ben B. Kaplan, 243rd Engr. Combat Bn., Camp Breckenridge, Kentucky.

Capt. H. B. Shpiner, 0-507759, A.P.O. 708, % Postmaster, San Francisco, California.

Lt. Frank E. Stamp, Naval Training Station, Newport, Rhode Island.

Capt. Edward Weitz, Combat Engr. Unit, Camp Gruber, Oklahoma.

1931

Lt. Clarence E. Margeson, Station Hospital, Camp Shanks, New York.

1932

Lt. L. A. Cheney, U. S. Naval Training Station, Sampson, New York.

1933

Lt. Morris E. Brown, USNR, Dental Disp. Area 5, Camp Lejeune, New River, N. C.

Lt. Emanuel Hoffman, 0-538388, Station Hospital, Section E, Boca Raton A.A.F., Boca Raton, Florida.

Lt. Martin A. Liddy, Station Hospital, Camp Shanks, New York.

Lt. Howard C. Mansell, B.O.Q. A-2, Naval Training Station, Newport, Rhode Island.

Lt. (j.g.) Merwin A. Todd, H-South, U.S.N.T.S., Sampson, New York.

1934

Lt. Herbert S. Maytin, Station Hospital, Army Air Base, Blythe, California.

Lt. Samuel C. Rockoff, Dental Clinic, Aberdeen Proving Ground, Aberdeen, Maryland.

Lt. (j.g.) C. F. Sabatino, USNR, Charlestown Navy Yard, Boston, Massachusetts.

1935

- Lt. John W. Gourley, DC-V(S), U. S. Naval Training Station, Sampson, New York.
- Lt. Adolph Thomas Levickas, Station Hospital, Camp Kilmer, New Jersey.
- Capt. John P. Mahoney, Station Hospital, Moody Field, Georgia.

1936

- Lt. Kenneth Earl Blanchard, Hotel Dorset, 30 W. 54th Street, New York City.
- Leo Brodie, Station Hospital, Camp Edwards, Mass.
- Capt. Herbert Samuel Brown.
- Lt. (j.g.) Michael Joseph DiGristine, USNR, Dental Dispensary, Parris Island, S. C.
- Lt. William A. Fischer, 28th Training Group, A.A.F.T.T.C., Jefferson Barracks, Missouri.
- Lt. William C. C. Philpot, Jr., 0-539721, Station Hospital, Ft. Monroe, Virginia.

1937

- Lt. Bernard R. Berk (Berkowitz), Main Post Office, Camp Peary, Virginia.
- Mark O. Davis, Jr., U.S.P.H. Dispensary, Washington, D. C.
- Lt. Harry E. Riffin.
- Capt. Isaac W. Sloan, 0-502472, A.P.O. 595, % Postmaster, New York City.

1938

- Lt. Edward K. Baker, Jr., A.P.O. 7295, % Postmaster, New York, N. Y.
- Lt. Julian W. Habercam, U.S.P.H.S.
- Capt. George C. Kraus, Lovell General Hospital North, Fort Devens, Mass.
- Lt. Edward H. Myer, Jr., 0-544979, Station Hospital, Ft. Bliss, Texas.
- Lt. (j.g.) Stanley G. Silverman, Naval Training Section, San Diego, California.
- Lt. Lawrence C. Smyth, Marine Barracks, Camp Lejeune, New River, North Carolina.

- Lt. Carl V. Westerberg, 270th Med. Sect., Camp Grant, Ill.

1939

- Lt. Samuel Barsamian, Post Dental Clinic, Ft. Sam Houston, Texas.
- Lt. (j.g.) Raymond Blais, Naval Amphibious Base, Fort Pierce, Florida.
- Lt. Irving W. Eichenbaum, Station Hospital, Army Air Base, Syracuse, New York.
- Lt. Charles H. Fallon, Jr., 0-535536, Station Hospital Box 82, Camp Gordon, Georgia.
- Lt. (j.g.) W. Edgar Johnson, Asst. Dental Surgeon, Charlestown Navy Yard, Boston, Mass.
- Capt. Osler C. Joyce, 0-523624, DC #1, Ft. Custer, Michigan.
- Capt. William F. Melson, 0-387898, M.D.R.P., Hoff General Hospital, Santa Barbara, California.

1940

- Capt. Theodore F. Czaplinski, 0-368466, Station Hospital, Fort Benning, Georgia.

1941

- Lt. (j.g.) Robert L. Betts, U.S.P.H.S., U.S.E.D., A.P.O. 868, Miami, Florida.
- Lt. (j.g.) Gilbert L. Caldwell, Camp Lejeune, North Carolina.
- Lt. John S. Callaway, 0-520078, Station Hospital, Ft. Thomas, Kentucky.
- Capt. Michael Fulton, Station Hospital, Bradley Field, Conn.
- Lt. (j.g.) Warren D. Haggerty, Jr., N. T.C., Bainbridge, Maryland.

1942

- Lt. Stanley G. Biega, 14 Q-B-1, Officers Club, Camp Pendleton, Oceanside, California.
- Lt. Paul Deneroff, 11th Q.M.R., Dental Clinic #4, Camp Lee, Virginia.

- Capt. Charles Gibel, 0-525947, Station Hospital, Daniel Field, Augusta, Georgia.
- Lt. Seymour G. Hyman, Bn. Dent. Surg., 266 Engineer Combat Bn., Camp Joseph T. Robinson, Arkansas.
- Henry R. Lasch, Jr., Station Hospital, DC #1, Fort Knox, Kentucky.
- Lt. Laurence Leeds, Station Hospital, Camp Livingston, Louisiana.
- Lt. Jason R. Lewis, 0-527410, 1624 S. U., D.C.I.A., Camp Ellis, Illinois.
- Lt. V. W. Mintz, 0-530925, Box 78—Station Hospital, Ft. McClellan, Alabama.
- Lt. Arthur A. Pecoraro, 0-533297, Seymour Johnson Field, Goldsboro, North Carolina.
- Sidney Rogoff, Asst. Dental Surgeon, U.S.P.H.S. Dispensary, 4th & D Streets, S.W., Washington, D. C.
- Lt. (j.g.) D. S. Stoner (Rakosky), Naval Training Station, Dental Corps, Unit I, Newport, Rhode Island.
- Lt. Joseph M. Tighe, A.P.O. 927, % Postmaster, San Francisco, California.
- Earle H. Watson, U. S. Marine Hospital, Baltimore, Maryland.
- March 1943
- Lt. (j.g.) Murray Birghenthal, Great Lakes Naval Training Station, Great Lakes, Illinois.
- John P. Blevins, U. S. Marine Hospital, Wyman Park Drive & 31st Street, Baltimore 11, Maryland.
- Lt. (j.g.) William J. Cirrito, P.H.S. 4265, U. S. Marine Hospital, Memphis, Tennessee.
- Lt. (j.g.) George P. Cook, USNR, Dental Dispensary, Parris Island, South Carolina.
- Lt. George M. DeYoung, 1913 S.C.U., Station Hospital, Camp White, Oregon.
- Lt. W. T. Greene, A.D.S., U. S. Public Health Service, U. S. Marine Hospital, Norfolk, Virginia.
- Lt. (j.g.) Paul A. Herman, USNR, B.O.Q. Armed Guard School, Gulfport, Mississippi.
- Lt. (j.g.) Seymour S. Klinger, U. S. Naval Training Station, E-South, Sampson, New York.
- Lt. Leonard Krugman, 0-1715682, A.P.O. 12922, % Postmaster, New York, New York.
- Lt. (j.g.) George P. Leatherbury, % Fleet Post Office, San Francisco, California.
- Arthur J. Lepine, U. S. Marine Hospital, Warren Street, Brighton, Massachusetts.
- Lt. (j.g.) R. S. Mehring, USNR, Dental Dispensary, Parris Island, South Carolina.
- Lt. (j.g.) John O'Meara.
- Lt. Vincent R. Onesti, Dental Surgeon, P.O.W. Camp, Clinton, Mississippi.
- Lt. (j.g.) Maurice Robinson, Great Lakes Naval Training Station, Great Lakes, Illinois.
- Lt. (j.g.) Mortimer Rosenfeld, U. S. Naval Training Station, Sampson, New York.
- Lt. (j.g.) Donald G. Russell, 5 Clay Street, Newport, Rhode Island.
- Lt. Alvin H. Savage, 174 Broad Street, Charleston, South Carolina.
- David B. Scott, ADS, P.H.S. 4328, U. S. Marine Hospital, Norfolk, Virginia.
- Lt. Robert T. Shilkret, 0-1715709, A.P.O. 9171, % Postmaster, New York, New York.
- Lt. Marvin Skowronek, Dental Unit X, Naval Training Station, Norfolk 11, Virginia.
- Capt. Alberto J. Walsh, 0-1726352, A.P.O. 834, % Postmaster, New Orleans, Louisiana.
- Lt. (j.g.) Milton S. Wilkinson, DC-V(G) USNR, Dispensary, Naval Air Station, Quonset Point, Rhode Island.

Capt. Marvin S. Yalovitz, 0-1735222
A.P.O. 308, % Postmaster, New York,
New York.

Lt. John B. Zimmerman, 1322 Service
Unit, Dispensary A, Fort Meade,
Maryland.

November 1943

Lt. Caryl T. Adams, M.D.R.P., Camp
Ellis, Illinois.

Lt. Melvin C. Beaumont, M.D.R.P.,
Camp Ellis, Illinois.

Lt. Fred Vance Beerbower, 0-1746387,
Troop Area Dental Clinic, Camp
Grant, Illinois.

Lt. Joseph L. Berkeley, 0-1715301,
101st General Hospital, Camp Grant,
Illinois.

Lt. Robert H. Bernert, M.D.R.P., Camp
Ellis, Illinois.

Lt. (j.g.) William Bisgeier, USNR, Den-
tal Clinic, Brooklyn Navy Yard Annex,
Bayonne, New Jersey.

Lt. Fred S. Blake, 0-1715473, 101st
General Hospital, Camp Grant, Illinois.

Lt. (j.g.) A. J. Brett, Dental Clinic Unit
II, Naval Training Station, Newport,
Rhode Island.

Lt. Robert J. Bruckner, 0-1715769,
Camp Joseph Robinson, Little Rock,
Arkansas.

Lt. Harry H. Camp, Jr., 0-1746917,
M.D.R.P., Camp Ellis, Illinois.

Lt. (j.g.) Pasquale E. Capalbo, H-South,
U. S. Naval Training Station, Samp-
son, New York.

Dr. H. F. Cerny, Federal Prison Hospital,
Springfield, Missouri.

Lt. (j.g.) Herbert Samuel Fine, U. S.
Navy Dental Clinic, 205 Park Avenue,
Brooklyn, New York.

Lt. (j.g.) Harry R. Gibson, Dental Dis-
pensary, Parris Island, South Caro-
lina.

Lt. Henry S. Hohouser, Station Hospital,
1325 S.U., Indiantown Gap Mil. Res.,
Penna.

Lt. Harold Hyman, Station Hospital,
Indiantown Gap Mil. Res., Penna.

Lt. (j.g.) Stanley Karesh, C-North, U. S.
Naval Training Station, Sampson, New
York.

Lt. Mervin Kramer, M.D.R.P., Camp
Ellis, Illinois.

Lt. Herbert A. Krasner, 0-1716979,
1280th Combat Engr. Bn., Camp
Gruber, Oklahoma.

Lt. George M. Lacher, 0-1725140, 196th
General Hospital, Camp Grant, Illi-
nois.

Lt. Bernard S. Lavine, 0-1715476, Co.
C, 26th Battalion, Camp Grant, Illi-
nois.

Lt. Seymour Lehrman, 0-1716977, Den-
tal Clinic #1, Camp Robinson, Arkan-
sas.

Lt. Mahlon P. Leiphart, 0-1725207, DC
#1 B—Building 2666, Camp McCoy,
Wisconsin.

Lt. Stanley M. Lipman, 0-1715660, 31st
Battalion, Camp Grant, Illinois.

Lt. August R. Machen, M.D.R.P., Camp
Ellis, Illinois.

Lt. William R. Martin, M.D.R.P., Camp
Ellis, Illinois.

Lt. J. F. Pruitt, 0-1735216, Station Hos-
pital DC #1, Camp Edwards, Massa-
chusetts.

Lt. Leonard E. Quitt, 0-1705386, 260th
Ord. Bn., Camp Swift, Texas.

Lt. Albert A. Reitman, 0-1716226, 260th
Ord. Bn., Camp Swift, Texas.

Lt. (j.g.) George Y. Richman, South C
Dental, U. S. Naval Training Station,
Sampson, New York.

Lt. Robert B. Rowland, Box 121, Station
Hospital, Ft. Jackson, South Carolina.

Lt. Gerald Rubin, 0-1715810, Troop
Area Dental Clinic, Camp Grant, Illi-
nois.

Lt. Morton Samet, 0-1715955, Troop
Area Dental Clinic, Camp Grant, Illi-
nois.

- Lt. N. J. Santaniello, 0-1705110, DC #1 B, Building 2666, Camp McCoy, Wisconsin.
- Lt. Emil M. Scheinberg, 0-1716158, Station Hospital Dental Clinic, Camp Grant, Illinois.
- Lt. Carl Benjamin Shpiner, DC #1 B, Building 2666, Camp McCoy, Wisconsin.
- Lt. Raphael Silverman, 0-1715777, 260th Ord. Bn., Camp Swift, Texas.
- Lt. Robert H. Smith, M.D.R.P., Camp Ellis, Illinois.
- Lt. Leon Steinberg, 0-17126061, Troop Area Dental Clinic, Camp Grant, Illinois.
- Lt. Sidney J. Stillman, 0-1715925, 101st General Hospital, Camp Grant, Illinois.
- Lt. Walter B. Stillwell, M.D.R.P., Camp Ellis, Illinois.
- Lt. Justin Stolitsky, 9/s (V-12)S-USNR, 81 Prospect Park, S.W., Brooklyn, New York.
- Lt. (j.g.) Raymond K. Tongue, USNR, Dental Dispensary, Parris Island, South Carolina.
- Lt. Edward W. Vandegrift, M.D.R.P., Camp Ellis, Illinois.
- Lt. Norman Vernick, 0-1715686, Camp Joseph Robinson, Little Rock, Arkansas.
- Lt. Martin Weiselberg, 0-1724998, Station Hospital Dental Clinic, Camp Grant, Illinois.
- Lt. Walter Wodka, Station Hospital, Camp Polk, Louisiana.
- Lt. H. W. Young, 0-1745717, M.D.R.P., Camp Ellis, Illinois.
- Lt. (j.g.) Philip Zeender, E-South, U. S. Naval Training Station, Sampson, New York.

1944

- Lt. Barnet Hoffman, Regional Station Hospital, Camp Maxey, Texas.
- Lt. A. S. Loewenson, Regional Station Hospital, Camp Maxey, Texas.
- Lt. (j.g.) Edward J. Mee, H Dispensary (North), U.S.N.T.C., Sampson, New York.
- Lt. R. M. Olive, Veterans Hospital, Brecksville, Ohio.
- Lt. (j.g.) Francis W. Ostrowski, DC, USNR, Dental Dispensary, Marine Barracks, Parris Island, South Carolina.
- Lt. Herman S. Rockoff, Regional Station Hospital, Camp Maxey, Texas.
- Lt. (j.g.) Henry J. Sancier, DC, USNR, Dental Dispensary, Marine Barracks, Parris Island, South Carolina.
- Lt. Jerome Steiner, Regional Station Hospital, Camp Maxey, Texas.

PROMOTIONS

(All of these men were listed in the December, 1943 issue of the JOURNAL)

1907

Major General Robert H. Mills.

1910

Col. Page P. A. Chesser.

1917

Lt. Col. Edgar J. Jacques.

1922

Lt. Col. C. Adam Bock.

Capt. J. B. Silverman.

1924

Com. R. D. Campbell.

1926

Com. Joseph D. Fusco.

Lt. Col. Robert D. Walker.

1927

Lt. Col. Brice M. Dorsey.

Lt. Com. L. R. Schilling.

1928

Major J. William Faucette.

Capt. Clement A. Zerdesky.

1929

Major Paul Q. Ohlsund.

Capt. Elwood W. Seeley.

Major Robert G. Springer.

1931

Capt. C. E. Saunders.

1932

Lt. Col. Samuel H. Bryant.

Major George O. Vezina.

1933

Capt. Philip L. Block.

Capt. Robert N. Hunt.

Capt. George Krasnow.

Capt. Clarence J. Rodgers.

Capt. Leon Seligman.

1934

Capt. William Schunick.

Capt. Fred A. Turner.

1935

Lt. Com. Philip Warren Anderson.

Capt. Harris Blake.

Capt. Richard E. Cofrancesco.

Capt. Thomas Van Donohue.

Lt. Col. Kenneth David Eye.

1936

Capt. Theodore G. Arends.

Capt. Eugene J. Dionne.

1937

Capt. Simon Markos.

Capt. Morris D. Simon.

1938

Capt. Carl E. Bailey.

Capt. Sigmund Cohen.

Capt. Wilbur N. Falk.

Lt. Charles C. Farrington.

Capt. Perley B. Hartwell.

Lt. Com. W. Basil Johnson, Jr.

Capt. David Saltman.

Lt. Ernest V. Williams.

1939

Lt. Joseph P. Allen.

Capt. James C. Davis.

Capt. Paul Gilden.

Capt. Marshall I. Kader.

Capt. Isidore Legum.

Capt. Max Miller.
 Capt. J. G. Rosen.
 Capt. Oscar J. Schoepke.
 Capt. Edward R. Stinebert.
 Capt. Irving S. Weiner.

1940

Capt. Benjamin Diamond.

1941

Lt. Sterrett P. Beaven.
 Capt. Edward Bressman.
 Capt. A. Alfred Brotman.
 Capt. Paul B. Castelle.
 Lt. Com. Jerome S. Cullen.
 Lt. James F. Easton, Jr.
 Capt. Maxwell S. Golden.
 Capt. Abraham Gudwin.
 Capt. Mario A. Lauro.
 Lt. Frank Marano.
 Capt. Malcolm M. Parker.
 Capt. George Reusch.
 Lt. Edward Rosenberg.
 Lt. Carl H. Schultheis.
 Capt. Irving I. Weinger.
 Lt. Raynard F. Zuskin.

1942

Lt. William A. Aldridge.
 Capt. Daniel W. Bixby.
 Capt. Stanley Entelis.
 Capt. Alan H. Herman.
 Capt. Murray Nussbaum.
 Capt. Mario F. Ramirez.
 Lt. Roger E. Williams.

March 1943

Capt. David Randall Book.
 Capt. Frank J. Bryce.
 Capt. Harry W. Cooper.
 Capt. Charles DiGristine.
 Capt. Jack Kushner.
 Capt. William G. Lee.
 Capt. Herbert S. Levy.
 Capt. Kenneth S. McAtee.
 Capt. Philip Nussbaum.
 Capt. Norman H. Rubin.
 Capt. Alexander Schechter.
 Capt. Daniel Shaw.
 Capt. Russell P. Smith.
 Capt. Eugene Spanier.
 Capt. Martin Stern.
 Capt. Sidney Suecoll.
 Capt. Anthony P. Yablonski.



Cures for Toothache.—By holding in the mouth a solution of bicarbonate of soda, (half a drachm in an ounce of water) complete relief can be secured.

Another sure Relief will be obtained by saturating a small bit of clean cotton or wool with a strong solution of ammonia, and applying it immediately to the affected tooth.

Swingley's One Hundred Year Almanac, 1876

Tooth Ache.—The following prescription is recommended as a "sovereign remedy" for this afflicting disorder: To a table spoon of any kind of spirits, add the same quantity of sharp vinegar and a tea spoonful of common salt: mix them well to-gether, and hold the liquid in the mouth so that it can enter the cavity of the tooth. It will give almost instantaneous relief.

The Citizens' and Farmers' New Town and Country Almanac, 1825

THEORIES OF TOOTH ERUPTION

ROBERT J. BRUCKNER, D.D.S.

(Senior thesis submitted by Dr. Bruckner as a member of the Class of November 1943)

FOREWORD

THE fundamental and ultimate objective of scientific research is to discover the satisfactory explanation of the various complex dynamic molecular interrelationships that unite to culminate in that mysteriously self-motivated mechanism labelled "life". All other endeavor is, at most, secondary in nature (no matter how worthy, productive, or beneficial) to this primary exploration of a challenging secret that must torment the minds of inquisitive men as long as its elusive wonder defies comprehension.

Man's knowledge of himself as a biological entity may be thought of as a sphere of light whose mycelioid surface pierces an encompassing darkness of unknown dimension. As progress is made, new rays appear or old ones penetrate farther so that ever larger grows the core, ever smaller the blackness. How much farther we must go, which projecting streak of light will suffice to strike the boundaries of ignorance, no one can say. Yet the answer we are seeking may be suddenly engendered by a seemingly remote investigation—such as a study of the mechanism by which a tooth erupts.

To survey the literature concerning tooth eruption is to examine an old biological problem that has provoked much speculation, yet has produced little substantial experimental material. This status in itself is indicative of the very basicness of the problem; for to determine the true solution, nothing less than a revelation of the *vis a tergo* that motivates cellular and organic activity must be promulgated. It is one intention of

this paper to indicate to what extent our advance has carried us and to display how a century of static progress has not brought us within sight of our goal but has, perhaps, set us on the correct path.

INTRODUCTION

When the various theories of tooth eruption are presented side by side with no indication of their chronological order of appearance, there is lost a certain perspective of the overall picture that leads to an unfair evaluation of the individual hypothesis. The partial purpose of this paper, therefore, will be to include this important but neglected dimension by dividing the text into two main parts: first, a consideration of the earlier theories propounded which are of historical and sentimental interest; second, a discussion of the various theories presented since the turn of the century. The former will be treated *en masse*; whereas the latter will be given more detailed attention and will be grouped according to similarity of the fundamental principles upon which each theory is based. Since progress has not been made at a spectacular rate, close attention will not be paid, necessarily, to the exact order of sequence in which the recent treatises have appeared.

Many of the early theories of tooth eruption were based on rather unsound foundations, not because of the inferior work of the investigators but because of the crude technics and methods of study that were at the disposal of these men. A detailed knowledge of the minute anatomy of the tooth and its adnexa is one prerequisite to an attempt to under-

stand the various problems involved much less to an attempt to propose a theory. Consequently, it would be well to describe briefly the embryological and histological phenomena incident to tooth development; for, after all, these delimit our field of speculation and deploy our imaginative processes in a more sound and more plausible direction than that taken by our predecessors.

DEVELOPMENT OF THE TOOTH¹

The initial cellular activity concerned with tooth formation is a proliferation of epithelial cells which forms a thickening that arches in conformity with the ridge of the jaw. This is known as the dental lamina; at fairly equal intervals along its length ectodermal outgrowths, the epithelial buds, appear. Each bud invaginates and a primitive mesodermal papilla develops. Differentiation into inner and outer enamel epithelium, as well as stellate reticulum, occurs early. As cellular proliferation enlarges the bud, the bell stage is reached and specialization of both epithelial and mesenchymal cells occurs. This is followed by formation of the dental sac wherein the surrounding mesoderm lays down fibrous tissue around the outer surface of the enamel organ and base of the papilla. The connective tissue cells of the sac will later form cementum, alveolar bone and the peridental membrane.

Amelogenesis and dentinogenesis occur; however, the scope of this paper does not warrant the detailed description that these processes demand. Suffice it to say that the dentin is deposited in the crown as far as the cemento-enamel junction and then continues to form the root under the influence of Hertwig's epithelial sheath. The exact method of dentin formation is still a controversial question. At any rate, the odontoblasts and the Korff fibers form the dentinal matrix,

a process that proceeds from without inward just preceding amelogenesis and is in a rhythmic manner synchronized "so that for each layer of dentin apposed there is a corresponding layer of enamel in the crown".

The tooth germ is situated in a bony crypt; and as it erupts, the roof of the crypt is the site of osteoclastic activity. Weinman, considering bone changes during eruption of the deciduous and permanent teeth, divides the process into three phases: (1) slow movement during early eruption, (2) fast movement as the tooth approaches and ruptures the oral epithelium, and (3) slow movement after the tooth has entered functional activity.² Apparently the tooth is the pace-maker; for when it is progressing slowly the bone is deposited slowly, one layer upon the other. On the other hand, during rapid eruption the bone is laid down as more or less parallel trabeculae separated by marrow spaces. It is interesting to note the existence of a wide space between Hertwig's epithelial sheath and the nearest trabeculae of the fundic bone, indicating, perhaps, that the tooth is erupting at a much faster pace than the bone can be deposited. At whichever rate the tooth may be erupting, the fundic bone is being laid down and also the alveolar crest is developing.

With this discussion fresh in mind it is appropriate to mention the fact that the permanent teeth, with the exception of the molars, do not erupt through a field of virgin bone as do the deciduous teeth. From a clinical standpoint this is frequently an added complication to eruption that manifests itself in serious malocclusions. From the histological and physiological point of view nature apparently attempts to simplify the matter by treating the root of the deciduous tooth as it would overlying bone.

... the erupting permanent tooth germs do not move continuously, but ... periods of eruption alternate with periods of rest; during the eruptive phase both alveolar bone and deciduous tooth are resorbed by osteoclastic activity to a larger extent than the actual movement of the permanent tooth would necessitate and this excess is made up for by a reparative new formation of bone and cementum in the period of rest.

The resorptive process, as a rule, begins on that side of the root facing the permanent crown; it sometimes also occurs on the opposite side.³

Kronfeld also points out that the deciduous teeth resorb when there is no successor or when the deciduous tooth is non-vital (although at a slower rate).³ It might be assumed that the rhythmicity displayed by the permanent tooth is similarly associated with the eruption of the deciduous teeth. One speculates whether this regular stop-and-go movement is of significance in the process of eruption itself.

Finally, the development of the periodontal membrane will be considered.

The periodontal membrane is derived from the dental sac. During its early development, the tooth germ lies within a capsule of loose connective tissue, the dental sac, which occupies the space between the tooth germ and the walls of its bony crypt. During the formation of the crown (prior to root formation, before any cementum is apposed), the fibers of the loose connective tissue encircle the tooth germ but show no special functional arrangement. However, as soon as the root begins to form, a marked change occurs in the arrangement of the fibers. These fibers become reorientated so as to run from tooth germ to bone. Two layers can be distinguished; an outer coarse fibrous layer next to the bone, and an inner loose layer next to the forming tooth. With the beginning of active eruption of the tooth, and the formation of cementum and alveolar bone, three layers of fibers may be distinguished: (1) the alveolar fibers; (2) the cemental fibers; and (3) the plexus intermedius between them. ... When the tooth has finished its active eruption and comes into full occlusion, the plexus intermedius disappears ...

and the normal character of the adult periodontal membrane is reached.¹

This, then, concludes the embryological consideration of tooth development and eruption. Although the reader may feel an inconsistency or unevenness in the extent to which the details have been presented, it is with an eye to subsequent discussions that certain phases have been given greater emphasis than others.

EARLY THEORIES

The simplest way, and one of the earliest ways, to explain the mechanism of tooth eruption is to assume that the "elongation of the pulp and the formation of the fang"⁴ causes the crown to move through the osseous tissues and into the mouth. Such an hypothesis implies that the growth of the tooth and the process of eruption are so closely interrelated that they may both be considered one and the same thing. It should be understood that this is not the case; growth is an entity separate from eruption. This has been displayed histologically, as described in the preceding section of this paper, and demonstrated clinically.

Another investigator proposed that the force behind tooth eruption is one of alveolar "squeezing", a process "similar to the expulsion of a moistened seed, from between the fingers by their compression".⁴

A more spectacular theory, and one that found great favor and acceptance, is Delabarre's belief that eruptive forces manifest themselves in a process similar to parturition whereby the tooth's enclosing sac, assumed to be attached to the gum above and the neck of the tooth below, contracts and delivers the tooth into the mouth.⁴

Still another idea, presented by Pierce, is the possibility that

The repeated closing of the jaws must exert to a large extent this mechanical force [of eruption] just as the bung of a barrel is elevated by a blow being struck upon the stave on either side of it.⁵

Tomes attempted to explain the mechanism of eruption by root elongation and, realizing one of the weaknesses of the theory, attempted to attribute the eruptive force, after root formation is complete, to bone destruction occlusally and bone construction apically. Thus, a "gradual contraction of the socket is the means used by nature for bringing teeth to the surface . . ."⁵

These theories can be invalidated quite conclusively on the basis of histological and clinical evidence. The theory of root elongation fails to explain why the crown of a tooth may travel a distance greater than the root length or the fact that teeth are fully erupted although root formation is incomplete. It also fails to explain why teeth remain unerupted although root formation continues to completion. Furthermore, Schour has shown that the removal of Hertwig's epithelial sheath in rats does not alter the rate of eruption despite a subsequent lack of root formation.⁶

As for the theory of alveolar "squeezing", one could hardly imagine the successful eruption of multi-rooted teeth under such conditions. Again histological evidence negates this theory and Delabarre's parturition concept.

These early theories, then, provide an interesting background to the general picture. They were the result of deliberation born of handicapped study. The improvement of histological technic offers the opportunity for a clearer comprehension of the problem's limitations, but actual experimental investigation has not kept pace with minute anatomical studies. Thus, we find few investigators, even in recent years, who can support

their respective claims with clinical and controlled experimental evidence. In many cases there appears to be a tendency to make the crime fit the punishment—experimental or clinical evidence is reshaped to conform with the investigator's hypothesis. An added complication is the determination of which evidence is simply coincidental and which bears a positive relation to the problem. Furthermore, there are those who apparently feel that logical reasoning is sufficient, overlooking the fact that biological processes are not always "logical". Nevertheless, there are those hypotheses that seem more reasonable than others although they may lack experimental evidence to bear them out; and, after all, progress is limited until we can actually control and alter the eruption of the *individual tooth ad lib*.

RECENT THEORIES

We now come to a consideration of those theories of tooth eruption propounded within the last half century. These also display a high degree of imagination, but the imaginative process has been confined and restricted to the realm of possibility in a greater measure than that displayed in preceding years. Imagination when applied to a scientific problem is a restricted flight of the mental processes and can not be unleashed to the full extent that an artistic endeavor might permit. Consequently, depending upon the theorist's appreciation of the field's limitations, we find great variations in the plausibility of the several hypotheses.

THEORIES OF VASCULARITY

In 1902 T. E. Constant presented his theory of peridental vascular pressure as an explanation of the mechanical phase of tooth eruption.

Since the forming root is never in actual contact with its bony surroundings it must

necessarily be against the vascular material in which it is embedded. Now this tissue appears *post-mortem* of far too jelly-like a consistence to oppose any effective resistance by virtue of its own structure—and yet such resistance there must be or the tissue would be obliterated. Whence, then, are its resisting properties derived? Necessarily from the blood pressure.⁵

It was on this histological and physiological basis that Constant established his theory. Other investigators have attempted to bring forward experimental evidence linking vascularity with tooth eruption. For example, the sympathetic innervation to one side of the jaw has been destroyed in lower animals, and with the resultant permanent vasodilatation a marked increase in the eruptive rate was observed.⁶ Further, in hypophysectomy “the tremendous decrease in the rate of eruption is correlated with a marked decrease in the vascularity of the periodontal tissues”.⁶ The same investigator describes the procedure in which children with bilateral submerged dentition are subjected to the surgical removal of overlying bone and tissue on one side, and are instructed to massage the tissues of the opposite unoperated side. There is induced a hyperemia, and “frequently the teeth on the unoperated side so treated erupt as rapidly as those on the operated side”.⁶

This experimental evidence does lend substantial support to the theory. Yet, one might ask whether the increased eruptive rate is due to the increased blood pressure or vascularity *per se*, or to a local concomitant increase in the various blood elements—especially hormones. Although the work in this direction is incomplete it does encourage a belief that vascularity is associated with tooth eruption whether it be mechanical, chemical, or both.

Another theory, and one that might be classed as a subdivision of Constant's work, is Came's theory of venous pres-

sure.⁷ This author contends that the outflowing pulpal blood creates a pressure in the opposite direction so that the tooth is moved by a force similar to the rocket-like propulsion of the squid. However, in order for such a pressure to be effective it would have to originate from within the pulp chamber since the whole theory is apparently based on Newton's “to every action there is an opposite and equal reaction”. Since pulpless teeth erupt, the theory is invalidated immediately. It might also be added that pulpitis and its resultant hyperemia would cause supra-eruption under the conditions mentioned. This does not occur. As might be expected, there is no experimental evidence to support this novel theory.

THEORIES RELATING EPITHELIUM TO ERUPTION

There are two interesting theories which attempt to relate epithelial cells to the process of eruption. One is W. W. James' theory of denuding of the overlying tissues with a resultant exposure of the tooth.⁸ This investigator also claims to have observed a column of epithelial cells extending from the tooth germ to the surface epithelium, to which he attributes responsibility for directing the path of eruption. In other words, the tip of the crown is connected to the surface epithelium by a strand of “epithelial coils”, as the author calls it, which serves as a conducting agent along which line the tooth erupts. Since no other investigator has confirmed the existence of the “epithelial coils”, it can be assumed that they are merely the dental lamina or its remnants. That the overlying bone undergoes osteoclastic destruction is known and, therefore, sheds no new light on the eruptive process itself.

A more profound proposition is that of Robinsohn, which attempts to explain

tooth eruption as a result of hormonal activity mediated through the epithelial structures found in the peridental membrane. He states:

(1) that the epithelial structures of the peridental membrane are in connection with the endocrine glands; (2) that they secrete a hormone which induces a resorption of the bone; (3) that these structures are divided into two parts according to their location into crown and root portion; (4) that quantitatively the structures in the crown are greater than in the root; (5) that as a result of number 4, the bone resorption qualities of the crown area are more active than those in the root areas.⁹

This explanation is probably refuted by Schour's observation that after hypophysectomy there is an increase in the number of epithelial rests although the eruptive rate is decreased.¹⁰ Despite the fact that Robinsohn's explanation is not exact he has at least revealed the crux of the problem. It is known that the endocrines control eruption, among other things. With this fact in mind we must first seek the very agency through which the hormone exerts its influence. Perhaps it is through the epithelium, perhaps via vascularity, or even directly to the tooth elements themselves. Certainly this seems to be the point at which our experimental attack should be made. If we can learn *where* the hormone exerts its influence we shall be closer to knowing *how* it does.

HORMONAL THEORIES

So closely integrated are the hormones and their effects to the various types of theories that it is rather unnatural to separate the following discussion from the rest. This is purely a mechanical division of the text.

In the opinion of this writer the shortest and most obvious route to the solution of our problem is through a detailed and exhaustive study of the endocrines.

Berman believes that the "forces producing the proper eruption of the teeth are partly mechanical and partly chemical in their nature . . ."¹¹ He attributes the eruption of the deciduous teeth to thyroid activity, shedding of these teeth to pineal activity, and further dental development to the hypophysis. These conclusions are based on the ebb and flow of endocrine gland activity, which may be little more than coincidental. Again, no experimental data are offered; but Shibata's work, briefly described in the *British Dental Journal*, supports an hormonal theory if the reported results are accurate. Various dental tissues (for example, "dental papilla substance") in solution were injected parentally into experimental animals, and the rate of eruption was noticed to increase. This investigator believes that eruption is due to "direct action of the hormones produced by the breaking down of the cellular elements of the tooth germ".¹²

Such an hormonal concept does not in the least conflict with the work of Schour and others, for from the results of their investigation it does not follow that vascularity itself is the mechanical factor in eruption. Vascularity is not necessarily the pawn of the endocrine as far as tooth eruption is concerned; vascular changes may be simply coincidental and coeval with the numerous abnormalities that an endocrine disturbance brings about. Noyes states that

The force exerted by the growing tooth is the result of the multiplication of cells in the tooth germ. . . . How this force is generated has been a matter of much speculation and investigation. It shows some points of similarity with the swelling of wood fibers when water is added. It apparently is related to osmosis and has direct relations to blood-pressure. It is certainly a very complicated matter, with chemical affinities at the bottom of it.¹

In just what manner and through which agency the endocrines exert their

influence are yet to be determined. It would be interesting and perhaps enlightening to observe whether an increased osteoclastic activity between the crown and overlying bone is induced by hyperpituitarism and to correlate the stop-and-go rhythm of eruption with these changes and with the rhythmicity with which the tooth itself develops. Another experimental procedure might be to perform a sympathectomy, thus producing a vasodilatation, and follow this with hypophysectomy, which decreases vascularity. With these two conflicting agencies at work it might be possible to display the independent role that the endocrines play, or, on the other hand, establish an intimate relation between the endocrines and vascularity.

A RECENT THEORY

Finally, let us consider a recently presented theory that is a modification of one of the earliest conceptions. It is Sicher's hypothesis wherein the investigator, on the basis of histological studies, distinguishes between the force of eruption in single-rooted teeth and that in multi-rooted teeth. The essence of his work is presented in the following excerpt:

[In the periapical region of the developing single-rooted tooth there is] a tissue which contains large amounts of fluid in spaces between a network of rather thick fibers. These spaces are usually of equal size; in some cases much larger spaces are found, formed perhaps by confluence of smaller. The larger spaces contain, in prepared sections, a coagulated fluid which stains only partly eosin. . . . Into this tissue, from the periphery, enter strong strands of fibers which are seen to arise in the periodontal area at the side of the root. They curve as a rather strong ligament around the edge of the root and then split up into the network containing the fluid filled spaces.¹³

This structure the author has named the "cushioned hammock ligament", and

he points out that pulpal proliferation is greatest in this area. This pulpal growth, which apparently exerts a force against the "hammock ligament", is correlated with osseous growth; and by an equalization of the latter growth force (through the hydraulic effect of the fluid filled ligament spaces), eruption occurs.

In teeth with two or more roots there is no "hammock ligament". Rather, the force of eruption, according to this author, is vested in the interradicular septum. "Thus the tooth is lifted upward in its alveolus, and the root grows into the periapical area."¹³ There is no experimental evidence to support this theory. Its fundamental principle seems to be antipodal to the studies presented by Weinman, whose work seems to indicate that the tooth in its eruption commands bone construction and destruction, and that the two are not equal partners. The theory cannot explain why a tooth, rapidly erupting, apparently leaves the bone behind, as evidenced by the space between Hertwig's epithelial sheath and the bony trabeculae. In the case of multi-rooted teeth the peridental membrane in the region of the interradicular crest could not exist under the conditions described by Sicher.

CONCLUSION

It may appear to the reader that the writer, having no original work to present, has simply adopted a hypercritical view toward all investigation that has been carried out. This may be true; for the writer does feel that to date, investigation has been initiated from the wrong direction. For one thing, he is wary of mechanistic explanations of tooth eruption. If the more abstruse biological functions were subject to physical laws, as we conceive them, much more would be known about physiological processes. Just as it is impossible to explain the

dynamics of mitosis on the basis of the laws of physics, in similar fashion the fundamentals of tooth eruption evade us because both processes are equally entrenched in the biological and not in the mechanical domain.

The endocrines afford an excellent starting point for investigation, for through them we have a substantial control over the process we are seeking to fathom. We must concentrate our scientific resources in determining which structure or process concerned with tooth eruption is the mediating agency.

At any rate, the problem is certainly a fascinating one and merits extensive experimentation. So-called "logical" reasoning will not supply the correct explanation unless there is convincing laboratory and clinical evidence to substantiate it. Let us hope that dental scientists, appreciating the more general implications of the problem, set out to solve it with intense vigor and enthusiasm. They may emerge with more than the answer to what may appear superficially to be an academic problem.

REFERENCES

1. Except where otherwise indicated, this section is based upon NOYES, F. B., SCHOUR, F., AND NOYES, H. H.: A Text-book of Dental Histology and Embryology. Philadelphia: Lea and Febiger, 1942, pp. 53-73, 119, 170-1, 307-8.
2. WEINMAN, JOSEPH P.: Bone Changes Related to Eruption of the Teeth. *Angle Orthodontist*, 11: 83-99, April 1941.
3. KRONFELD, RUDOLF: The Resorption of the Roots of Deciduous Teeth. *D. Cosmos*, 74: 103-120, February 1932.
4. CONE, C. O.: An Essay on the Origin, Development and Eruption of the Teeth. *Am. J. D. Science*, First Series, 6: 221-32, March 1846.
5. CONSTANT, T. E.: The Eruption of the Teeth. *Congrès Dentaire International*, 1902, pp. 180-93.
6. SCHOUR, ISAAC, AND MASSLER, MAURY: Studies in Tooth Development. Theories of Eruption. *Am. J. of Orth. and Oral Surg.*, 27: 552-76, October 1941.
7. CAME, DIGBY: A New Theory of Eruption of the Teeth. *D. Magazine*, 41: 422-29, 499-504, July 1924.
8. JAMES, W. WARWICK: A Theory of Eruption. *Int. J. of Orthodontics*, 9: 678-83, September 1923.
9. BODECKER, CHARLES F.: Concerning Organs Affecting the Eruption of Human Teeth. *Int. J. Orth. and Oral Surg.* 14: 657-66, August 1928.
10. SCHOUR, ISAAC: The Hypophysis and the Teeth. *Angle Orthodontist*, 4: 3-21, April 1934.
11. BERMAN, LOUIS: Some Relations of the Teeth to the Endocrine Glands. *D. Cosmos*, 67: 35-41, January 1925.
12. The Influence of the Parenteral Injection of the Tooth Cell Substances on the Growth and Structure of Teeth. *Brit. D. J.*, 50: 307, March 1929.
13. SICHER, HARRY: Tooth Eruption: Axial Movement of Teeth with Limited Growth. *J. Den. Res.*, 21: pp. 395-402, August 1942.

A CLASS TO BE REMEMBERED

In January of this year there entered the B.C.D.S. a unique class. The oldest dental school in the world, with its own unique record of over one hundred Freshman classes, had never seen a group to match this aggregation of neophytes. Because of the conditions imposed by the war many of these fellows came to the School from military service in over a hundred different stations; some of them began their enlistments as members of the class in the Army Specialized Training Program or the Navy V-12 Program. A few, ineligible for both Programs because of physical disqualifications, entered as civilians. The data presented below and the appended notes identify all the members of the most interesting and the most unusual class in the long history of our School.

- Roberto A. Alvarez (B.S.), Caguas, P. R., Johns Hopkins, University of Dayton—A.S.T.P.
- Ferdinand Asciola, Providence, R. I., Providence. Fort Devens, Camp Hood, Army and Navy General Hospital (Hot Springs, Ark.)—A.S.T.P.
- Seymour Ash, Elizabeth, N. J., Union—A.S.T.P.
- Giuseppe P. Attanasio, Linden, N. J., Union, University of Maryland. Camp Lee, Camp Grant, Army General Dispensary (Baltimore)—A.S.T.P.
- Gabriel S. Azzaro, New Haven, Conn., Providence—Navy V-12.
- Dennis Balamaci (B.S.), Woonsocket, R. I., Providence. Fort Devens, Camp Barkeley—A.S.T.P.
- Joseph F. Baldacchino, Jr., Barnesboro, Pa., St. Francis. Camp Grant—A.S.T.P.
- Joseph M. Ballouz, New Martinsville, W. Va., Marietta—Civilian.
- Charles F. Beck, Yonkers, N. Y., Syracuse. Camp Upton—A.S.T.P.
- Joseph S. Bell, Waterbury, Conn., University of Connecticut. Fort Devens—A.S.T.P.
- Joseph E. Belott (B.S.), Newark N. J., University of South Carolina. Miami Beach, Seymour Johnson Field, Fort Meade—A.S.T.P.
- Jack Binderman, Beckley, W. Va., University of West Virginia—A.S.T.P.
- Paul D. Bingham (A.B.), East Jaffrey, N. H., St. Anselms. U. S. Naval Hospital—Navy V-12.
- Nelson D. Bookstaver, Teaneck, N. J., University of Maryland. National Naval Medical Center—Navy V-12.
- Ashur G. Chavoor, Worcester, Mass., Clark, Holy Cross. U. S. Naval Hospital (Annapolis)—Navy V-12.
- Roland A. Chouinard, Fall River, Mass., University of Maryland—A.S.T.P.
- George A. Clark, Lisbon, N. H., University of New Hampshire—A.S.T.P.
- Thorburn R. Clark, Pearl River, N. Y., Colorado—A.S.T.P.
- William J. Coleman, Jr., Baltimore, Potomac State—A.S.T.P.
- Warren W. Cook, Frostburg, Md., Western Maryland—A.S.T.P.
- Charles W. Cox, Morgantown, W. Va., University of West Virginia—Navy V-12.
- Donald Cray, Springfield, Mass., American International. Chelsea Naval Hospital—Navy V-12.
- William H. D'Abbraccio (Ph.B.), Providence, R. I., Providence. U. S. Naval Hospital (Newport)—Navy V-12.
- Frank J. D'Agostino (A.B.), Brooklyn, N. Y., New York University. Fort Dix—A.S.T.P.
- Fernando E. Davila-Lopez (B.S.), Rio Piedras, P. R., University of Puerto Rico—Civilian.
- Bernard S. deHosson, Westfield, N. J., University of Maryland—Navy V-12.
- Josef A. DeMuzio, Bellows Falls, Vt., University of New Hampshire—Navy V-12.
- Vincent F. DiFazio, Astoria, N. Y., Fordham. Camp Upton, Camp Grant—A.S.T.P.
- Raymond J. Dorobiala (A.B.), Buffalo, N. Y., Canisius. Fort Niagara, Camp Pickett, Lawson General Hospital—A.S.T.P.
- Metro Dryhynich (B.S.), Perth Amboy, N. J., Rutgers—Navy V-12.
- Everette A. Eckerd, Granite Falls, N. C., Duke. Fort Benning—A.S.T.P.
- Samuel H. Ehrenhalt, Long Branch, N. J., University of Southern California, New York University. Camp Dix—A.S.T.P.
- Fred Ehrlich, Baltimore, University of Maryland. Aberdeen—A.S.T.P.

- Richard W. Eschenburg, Mt. Clemens, Mich., Michigan State. Fort Bragg, Fort Meade—A.S.T.P.
- Maurice J. Fagan, Jr., (B.S.), Coventry, R. I., Providence. Fort Devens, Camp Barkeley—A.S.T.P.
- Salvatore A. Festa (A.B.), Vineland, N. J., Elon—A.S.T.P.
- Ralph W. Flinchbaugh, Richmond, Ind., Ohio State. Fort Benjamin Harrison, Camp Barkeley, General Hospital (Hot Springs, Ark.)—A.S.T.P.
- Robert S. Forhman (B.S.), Baltimore, Loyola. U. S. Naval Hospital (Annapolis)—Navy V-12.
- Jackson W. Fritz, Baltimore, Washington College. Camp Grant—A.S.T.P.
- William J. Gatlin, New Bern, N. C., Appalachian State. Fort Jackson, Gunter Field, Stuttgart Field, Randolph Field, Camp Maxey, General Hospital (Hot Springs, Ark.)—A.S.T.P.
- John C. Gerken, Ocean City, N. J., University of Maryland—A.S.T.P.
- John O. Gette, Lonaconing, Md., University of Maryland, Potomac State—A.S.T.P.
- James P. Gill, Hoxie, R. I., Providence. Fort Devens, Camp Hood—A.S.T.P.
- Stanley H. Gottlieb (B.S.), Annapolis, Md., University of Maryland—A.S.T.P.
- Edward J. Gramse (A.B.), Holyoke, Mass., Union—Civilian.
- Lynn P. Greene, Rome, N. Y., Hartwick. Fort Dix—A.S.T.P.
- Robert N. Grier, Morgantown, W. Va., University of West Virginia—Navy V-12.
- Neil E. Hannan (B.S.), Troy, N. Y., Siena—Civilian.
- William D. Hartsock (A.B.), Hagerstown, Md., Gettysburg. Fort Meade, Camp Pickett—A.S.T.P.
- Roy F. Hepler, Jr., Huntington, W. Va., Marshall. Fort Hayes—A.S.T.P.
- Gerald J. Heroux (A.B.), North Uxbridge, Mass., Holy Cross—Navy V-12.
- John M. Hohing, Lonaconing, Md., University of Maryland—A.S.T.P.
- Charles H. Hopkins (B.S.), Ironton, Ohio, Marshall. Fort Hayes, Fort Benning—A.S.T.P.
- John T. Hughes, Jr., (B.S.), Selma, N. C., Wake Forest. Fort Bragg, Camp Pickett, Camp Blanding, Fort Sill, Fort Meade—A.S.T.P.
- Clarence E. Isaacson (B.S.), Portsmouth, N. H., University of New Hampshire. Fort Devens, Kingsley Field, Fort Bragg—A.S.T.P.
- Samuel W. Johnston (B.S.), Curtis Bay, Md., Wake Forest—A.S.T.P.
- Burton B. Kaye (A.B.), New Haven, Conn., Yale. Fort Devens, Camp Barkeley, Camp Maxey—A.S.T.P.
- Stanley M. Kotula, Baltimore, University of Maryland—Navy V-12.
- Alvin D. Kronthal, Baltimore, University of Maryland. Fort Meade, Aberdeen—A.S.T.P.
- Robert F. Lamb, Deal, N. J., University of Maryland—Navy V-12.
- Paul R. Lambert, South Charleston, W. Va., Marshall—Navy V-12.
- James H. Langley, Manchester, N. H., St. Anselms, University of New Hampshire—A.S.T.P.
- Edward B. Lee (B.S.), Bath, N. Y., Hartwick—A.S.T.P.
- Joseph E. Lohman (B.S.), Brecksville, Ohio, Kent State. Camp Sibert, Fort Meade—A.S.T.P.
- Angelo R. Lombardi, Palisades Park, N. J., St. Peters. Fort Dix, Camp Grant—A.S.T.P.
- Stuart R. Londeree, South Charleston, W. Va., Marshall—Civilian.
- Francis M. McCall (A.B.), Bogard, Mo., Missouri Valley College. Edgewood Arsenal, Station Hospital (Edgewood), Camp Patrick Henry, Casablanca, Camp Kilmer—A.S.T.P.
- Robert L. Mohn (B.S.), New Bern, N. C., Wake Forest—Civilian.
- Chris A. Mollis (Ph.B.), Yorkville, Ohio, Loyola. National Naval Medical Center (Bethesda, Md.)—Navy V-12.
- Lee C. Nathans, Providence, R. I., Brown. U. S. Naval Hospital (Newport, R. I.)—Navy V-12.
- Revere A. Nielsen, Greenbelt, Md., University of Maryland—A.S.T.P.
- Clarence S. Olive, Fayetteville, N. C., Davidson—Navy V-12.
- Leon F. Paszek, Baltimore, Loyola—Civilian.
- Robert P. Posner (B.S.), Freeport, N. Y., Bucknell. Camp Upton, Camp Croft, Camp Holabird—A.S.T.P.
- Leonard Rapoport (B.S.), Baltimore, University of Maryland. Aberdeen—A.S.T.P.
- William K. Roth (B.S.), Baltimore, University of Maryland, Loyola. National Naval Medical Center (Bethesda, Md.)—Navy V-12.
- Aaron Schaeffer (A.B.), Baltimore, Western Maryland, Johns Hopkins. Camp Lee, Aberdeen—A.S.T.P.

Clarence H. Schiller (B.S.), Poland, Ohio, Heidelberg. Camp Perry, St. Petersburg (Fla.), Camp Crowder, Fort Meade—A.S.T.P.

Aaron Schwartz, Baltimore, University of Maryland. Fort Meade—A.S.T.P.

Robert J. Scott, Hopedale, Mass., University of Maryland. Camp Barkeley, Fort Devens, Camp Maxey—A.S.T.P.

Walter J. Seifert, Brooklyn, N. Y., Long Island University. Camp Grant, Fort Dix—A.S.T.P.

Thomas E. Sikes, Jr., Greensboro, N. C., University of North Carolina—A.S.T.P.

William B. Smith, Reisterstown, Md., Notre Dame—Navy V-12.

Mitchell M. Soltys (B.S.), Reading, Pa., Albright. New Cumberland, Fort McClellan, New Orleans Staging Area, Camp Barkeley, Fort Hayes—A.S.T.P.

Marsden F. Stamp, Elmira, N. Y., Syracuse—Navy V-12.

Edward J. Steinhof, Fall River, Mass., Providence—A.S.T.P.

William M. Talbott (B.S.), Baltimore, Loyola—A.S.T.P.

(Miss) Zahide M. Torres (B.S.), Santurce, P. R., University of Puerto Rico.

Jack R. Traylor, Huntington, W. Va., Marshall, Yale. Fort Thomas, Camp Van Dorn—A.S.T.P.

John F. Treanor (A.B.), Malden, Mass., St. Anselms. Camp Sibert, North Africa, Everglades (Fla.)—A.S.T.P.

Edmond G. Vanden Bosche (B.S.), Towson, Md., Pennsylvania State—Navy V-12.

Jorge Vila-Santana (B.S.), Rio Piedras, P. R., University of Puerto Rico—A.S.T.P.

Paul C. Wainwright (B.S.), Baltimore, Loyola. Wheeler Field (Hawaiian Islands), Fort Slocum, Fort McDowell, Mitchell Field, Richmond Army Air Base, Western Field, Norfolk Army Air Base—A.S.T.P.

Lawrence J. Whalon, East Dorset, Vt., St. Michaels. Fort Devens, Camp Grant—A.S.T.P.

James F. Whisnant, Henrietta, N. C., Clemson—Navy V-12.

Howard C. Yerger (A.B.), Fairlawn, N. J., Pennsylvania State. Fort Dix, Fort McClellan, Fort Slocum, Camp Kilmer—A.S.T.P.

After 3 months of basic training at Miami Beach, Belott served 2 months at Seymour Johnson Field, Goldsboro, N. C., as an instruc-

tor of airplane mechanics. He spent his last month before entering the B.C.D.S., at the Dental Clinic, Fort Meade.

Bingham served 6 months at the Naval Hospital, Portsmouth, N. H., where he was assigned to the Prosthetics Laboratory of the Dental Clinic.

Bookstaver is the brother of Julian Bookstaver '40.

Cray served 3 months as a dental assistant at the Chelsea (Mass.) Naval Hospital.

Dorabilia entered dental school with 7 months' experience in the Army Medical Corps, including basic and advanced training.

Ehrlich was stationed at the Dental Clinic, Aberdeen, Maryland, during the 2 months of his pre-A.S.T.P. period.

Following 5 months of basic training at Fort Bragg, Eschenburg put in 1 month as a dental assistant at Fort Meade.

Greene had the unusual and profitable experience of serving his complete 6 months' army assignment at the Dental Clinic, Fort Dix.

During his 8 months of army service Hartsock was assigned to the Army Medical Corps.

For 5 months of his active service period Kronthal was attached to the Dental Clinic at Aberdeen.

Lohman served 9 months in the Chemical Warfare Service at Camp Sibert, Alabama.

Before entering the B.C.D.S. McCall, a graduate of Missouri Valley College, had 21 months in the army. His record includes a tour of overseas duty—the North African campaign—with the 533rd M.H.S.P. (Sep). He wears the Good Conduct medal and campaign ribbons for the American Theatre of Operations and for the African-European Theatre. McCall, a T/4, also spent 4 months in the Chemical Warfare Service at Edgewood Arsenal, 8 months at the Edgewood Station Hospital, and 6 months at Camp Kilmer.

Mollis put in 5 months at the National Naval Medical Center, Bethesda, Maryland, before being transferred to the Navy V-12 Program.

Olive is the brother of Robert Olive, Jr., '44 and the son of Robert Olive '14 (U. of M.).

Master Sergeant Rapoport enlisted in April, 1941. After 2½ years in the Ordnance section at Aberdeen he was transferred to the Medical Corps.

Roth was assigned to the National Naval Medical Center during his 4 months of active service.

Before his induction in June, 1942, Schaeffer taught mathematics for 3 years at a Baltimore junior high school.

Sergeant Soltys served 30 months before entering the B.C.D.S. and was awarded the Good Conduct Medal.

One of the 22 New Englanders of the class, Treanor enlisted in March, 1942. A staff sergeant in a Jungle Troops unit at Camp Si-berth, he volunteered for overseas duty and was sent to North Africa on convoy duty.

Technical Sergeant Wainwright enlisted for foreign service in June 1941. After brief assignments at Fort Slocum and Fort McDowell

he sailed for Hawaii in August, where he remained until April, 1943. While there he served in the Medical Department of the Air Corps, attached to Wheeler Field. During the attack of December 7, 1941, Wainwright assisted in the care of the wounded. After his return to the mainland, he was stationed at Mitchell Field and at the Richmond (Va.) Army Air Base. Wainwright is the son of F. C. Wainwright '09 (B.C.D.S.).

T/4 Yerger, formerly in the employ of the Western Electric Co. at Kearny, N. J., received 18 months of valuable experience as an X-ray technician at Camp Kilmer.



DENTISTRY.—Amongst the vagaries of the eccentric physician (Monsey), was the way he extracted his own teeth. Round the tooth sentenced to be drawn he fastened securely a strong piece of catgut, to the opposite end of which he affixed a bullet. With this bullet and a full measure of powder, a pistol was charged. On the trigger being pulled, the operation was performed effectually and speedily. The doctor could rarely prevail on his friends to permit him to remove their teeth by this original method. Once a gentleman who had agreed to try the novelty, and had even allowed the apparatus to be adjusted, and at the last moment exclaimed, "Stop, stop, I've changed my mind." "But I haven't, and you're a fool and a coward for your pains," answered the doctor, pulling the trigger. In another instant the tooth was extracted, much to the timid patient's delight and astonishment.

Hagerstown Town and Country Almanack, 1862 (Hagerstown)

WHY DO TEETH DECAY?—All the theories that again and again have been advanced in answer to this enquiry, have long since vanished before the true doctrine of the action of external corrosive agents. The great and all-powerful destroyer of the teeth is acid, vegetable or mineral; and it matters not whether that acid is formed in the mouth by the decomposition of particles of food left between and around the teeth, or whether it is applied directly to the organs themselves: the result is the same, the enamel is dissolved, corroded, and the tooth is destroyed. Very much of the decay in teeth may be attributed to the corrosive effects of Acetic Acid, which is not only in common use as a condiment in the form of vinegar but is generated by the decay and decomposition of any and every variety of vegetable matter. When we consider how very few persons comparatively take special pains to remove every particle of food from between and around their teeth immediately after eating, can we wonder that diseased teeth are so common, and that early loss is so frequently deplored.

Hagerstown Town and Country Almanack, 1855 (Hagerstown)

THE ADMIRAL'S BRIDGE

RICHARD HART

(The author of this unusual story is the head of the Literature Department of the Enoch Pratt Library, Baltimore. Although it represents a departure from the traditional publication policy of dental journals, the Editor decided to publish the story in the belief that the readers of the JOURNAL would welcome a good fictional contribution that presents a dentist favorably yet realistically.)

MRS. Joliffe put down her coffee cup and peered at her husband as though he were a prize shrub that was not doing its best. Dr. Joliffe sighed. He was aware that once more he had failed in an attempt to keep bad news to himself.

"Ed, you're worried about something. If it's that old fool and his plate—"

Dr. Joliffe smiled dimly. "No, dear. The senator was very well satisfied when he left last night. It seems that the case dropped down in the back when he said 'Roosevelt'; but I think we fixed that. Have you seen the paper this morning?"

"You know very well I haven't and neither have you. There it is still folded up, under your elbow. What makes you think there's anything in the paper?"

"I listened to the late news while I was fixing my Ovaltine. Stuart Brierly's dead." The sharp angles of his wife's face seemed to blur. For a moment she kept one of her uncommon silences. "I didn't tell you when I came to bed for fear it would disturb you and you'd have trouble getting to sleep."

"Oh dear," said Mrs. Joliffe softly, as though she were alone. "What a pity. What an awful pity." And then to her husband, "I'm so sorry on your account, Ed. You think so much of him. What was it, was he ill long? He looked so well when he left."

"He wasn't sick at all. I might as

well tell you," said Dr. Joliffe. "You're bound to read all about it, and it'll be on the air again today. He was killed in a battle."

His wife's thin hands joined tightly, so that the rings stood out beyond her fingers. "That lovely woman . . . those nice girls . . . did the ship sink?"

"No, the commentator said the ship was only damaged. A Jap shell landed right on the bridge. He said, 'Admiral Brierly, Captain Doyle and three signalmen were killed instantly'."

"But Edith . . . surely they told her before that broadcast."

"She must have heard soon after it happened. The Navy Department would wire her, and I imagine some friend or classmate of Stuart's came out from town."

Mrs. Joliffe seemed still to be struggling with an error in fact, as though the servant had given her a phone message which she knew to be garbled. "But, Ed, I didn't think admirals, men of Stuart's age, fought like the young officers and sailors. That's a terrible thing, a valuable man like that, fifty-eight years old with three grandchildren and all his responsibilities. Poor Edith. I suppose he carried very heavy insurance. Most Navy men seem to, and she'll get a good pension, of course."

"Oh Edith will manage all right I suppose, so far as money is concerned. It's how she'll feel that worries me."

Mrs. Joliffe frowned. "Edith's no more sensitive than I am. She's dreamy and impractical, that's all. I'm more concerned about poor Miranda. The married girls will take it well enough, but the youngster worshipped her father, and being alone in the house with her mother... Do you think I should go over there right away, this morning? After all, you were his best friend."

Dr. Joliffe covered her hand and the rings that did not fit with his strong, young-looking fingers. "That's a fine idea. Maybe you can help with the telephoning and cheer up the little girl."

He helped her to pile the breakfast things in the sink. Neither of them had touched anything but coffee.

"I'll do these later," said Mrs. Joliffe, as she rinsed the percolator. "I'm nervous. I want to get out and walk. Did you say he was killed instantly?"

"That commentator," said Dr. Joliffe, "made me sick. He tried to dramatize the whole business, made it seem cheap. Later, speaking of the damage we did to the Japs, he used a very unpleasant phrase; it sticks in my mind. He said, 'When a sixteen-inch shell makes a direct hit, they aren't shot. They just dissolve in a bloody mist.'"

Mrs. Joliffe paused at the door. "That's horrible; you oughtn't to dwell on such things. Poor Edith. I suppose they'll say he was buried at sea. Good-bye, dear; go read the paper or get some music. After all, today's your only time to yourself till next Sunday..."

She closed the door upon the tail of her good-bye, leaving her husband in the sudden warm quiet of the kitchen. All at once he felt more at peace and more wretched. His wife's presence had tempered his distress. It was difficult to say the sort of thing she expected and

at the same time to think and feel privately. Now, for the first time, he could turn and listen to his inner recording of the announcer's voice. "The Navy Department announces the death in action of Rear-Admiral Stuart Brierly and Captain Peter K. Doyle... in a bloody mist."

Just six weeks before they had stood here in the kitchen. Stuart always used the back door; it was a block closer. That afternoon had been a bit of an occasion. Dr. Edward Joliffe had just completed the Admiral's new bridge. This triumph in oral engineering had given them both some amusement and the dentist several headaches. It had delayed certain minor naval operations for a day or two by its refusal to slip precisely into place on the trial run. They had had a drink in the kitchen to celebrate, on Stuart's suggestion, the successful opening and closing of the Joliffe Memorial Bridge.

Half closing his eyes, he could see the Admiral's spare figure outlined against the lighted rectangle of the kitchen door. Strange that never until this moment had he had occasion to express, even to himself, what this friendship had meant to him. For ten years the two men had come to spend more and more of their sparse leisure together. Such wordless understanding takes root only among friends who have weathered the more tropical relationships between person and person. The sum of their common holdings had proved greater than their differences. One had been born in Maine, the other in Maryland; the Admiral had three substantial daughters, the dentist was childless; the orbit of one had been Baltimore and Washington, the other had been limited only by the ice of the polar caps and the poverty of

the upper air. One rested a deep garniture of gold lace upon the breakfast table; his friend, the dark woollens of substance and propriety. But the breakfast table was the same; the food, the talk, the politics, the anxieties, the devoted, slightly abstracted women across the table were the same.

In the first chats between dentist and patient, ten years ago, the common denominator had been chess. Once, after a painful extraction, Captain Brierly had taken two Anacin and had stayed for a game, which he lost. Dr. Joliffe's chess club was a pleasure which he bravely defended from encroachment by toothache, even by his wife. He had never regretted his invitation to Brierly to join the guarded Wednesday clique. The six members had chosen one another with even greater care than they gave their ivory chessmen and boards of rose and satinwood. They welcomed Joliffe's new friend to fill the place of the first of their number to make an involuntary resignation. Healthy men of fifty do not relish a persistent reminder of death. The shadow of Father Craig, who came to no more Wednesday evenings, was lifted by Stuart Brierly.

During these ten years, broken by the Captain's promotion to Rear Admiral and his subsequent tour of duty in the Far East, the two families had drifted into a casual intimacy. Edith Brierly and Helen Joliffe were happy to see their major problems so well content; and Edith, who was witty, teased them about their community of tastes. It was less coincidence than some basic likeness of pattern that made them prefer French cooking, the songs of Schubert, chess, Lawrence's Arabian adventure and his book, Civil War battlefields and Shakespeare's "Tempest" to other possible

pleasures. Without being aware of it they had become somewhat dependent upon each other's good opinion.

And every other Wednesday, since Stuart had been stationed in Washington, came the evening of chess. Although the club met through the summer, it was the winter nights that seemed clearest now. Your house last time, mine tonight, the Admiral's after that. Card tables set out, an honest fire, the guests arriving with the promptness of professional men who all week tax their hearts to meet minor deadlines.

The breakfast dishes and silver were washed and dried. He had done them like a somnambulist. When his hands were free he lit a cigarette. Although there was no work he could do this morning, his office drew him, as it usually did in times of trouble that could not be mended by dentistry. The furnishings and equipment were the finest that good credit can provide. Dr. Joliffe found comfort in the delicate and costly tools of his craft. It was his pride that he always used a fresh burr for each excavation, to the great economy of his, and the patient's, nerves.

A shaft of sunlight pierced the frosted glass of the window and filled the room with a watery glory. In a place of honor on the supply cabinet rested the model for the Admiral's bridge. The best case of its kind he had done; an incisor, a canine, and a bicuspid. He had destroyed several impressions before he had got one exactly to his liking. The finished bridge was a beauty. Wonderful stuff, vitallium, stronger than gold and lighter, inconspicuous in color, clean and tasteless. Not necessary these days to fill a patient's mouth with a chandelier and a set of fire irons. The matching of the Admiral's natural shade was per-

feet; except for two small clasps you wouldn't know he had a thing in his mouth that God hadn't put there. The Lord giveth teeth and the Lord taketh away.... It was a great satisfaction to do a perfect job for a friend. Teeth are so much more important than the thoughtless young realize, until they find that they can't face even a tender steak without misery. He turned the model in his fingers. Where was it now? Full fathom five, probably, unless... Damn it all, why can't we close off our minds against these grotesques that insist on popping or crawling in, at the worst possible time, in the worst possible taste.

Helen was right about things like this not happening to men of fifty-eight with three grandchildren. What an intricate thing is the life of an admiral and a grandfather. Edith and Miranda alone, in that easy-going beautiful house with ten years of money and care built into it. Two dogs and a sailboat, two cars and two servants you can't keep on a pension, even an admiral's. A posthumous Congressional medal wouldn't help much either. You cast an admiral like a stone into the sea, and the ripples widen in ever-increasing circles. Edith's shock and sickness at the core, his own distress close to it; Helen's case of nerves; widening rings of sorrow, regret; inconvenience to the yawning readers of the Sunday papers who say "So in this war they kill admirals; they should be shooting congressmen next" and then turn to the funnies.

Dr. Joliffe searched the drawers of his supply cabinet until he found a small clean box. For a moment he held the model to the light, admiring its perfection; then he closed the lid of the box and stowed it away in the rear of a lower drawer. In his secretary's file he found under J the ten-years' record of the

admiral's martyrdom. Stuart's teeth hadn't held up very well. Navy men's often didn't; no proper attention to diet, and long stretches away from civilization. And these service dentists, all a matter of routine to them. Gold inlays, porcelains and amalgams; extractions, more than a dozen. The ink was unfaded on the last item, one three-teeth vitallium removable, one hundred and fifty dollars. He had told Miss Fielding not to send a statement while the Admiral was on active service. Stuart had once remarked that when he was away bills of any size seemed to distress his wife's rather vague budgeting.

Dr. Joliffe began to tear the card, but stopped. Helen would say he was being melodramatic or sentimental. She liked to fire those two words at him, along with half a dozen others she kept conveniently at hand. She would probably resent the loss of the money. Edith would feel that he had trod upon both her dignity and her pride. But if Stuart understood his motive, that was all that mattered and the others need never know. The card was half torn across when he remembered Miss Fielding. She knew every patient's record in the file and the amount due on each. The woman had a mind like a cash register. Miss Fielding could not be bullied into forgetfulness, but she might be tricked. There was no reason why he shouldn't have received a check from Stuart over the week-end. With Miss Fielding's pen, another indignity, he wrote "Paid in Full" with the date, and refled the card.

The band of tightness that had oppressed him all night, constricting his chest and stomach, seemed to have relaxed its grip. He lit another cigarette and wandered into the library. The sun had reached his reading chair. Dr. Joliffe fetched an ash tray and the Bruce

Rogers Shakespeare. It opened to his and the Admiral's favorite play.

The old Lynch clock beat out the seconds, the sun moved a foot across the floor. The boatswain, born to be hanged, cursed and cried "Yare!" Prospero considered the problems of a scholar in politics and the parent of a growing daughter on a desert island. Miranda deplored the attentions of a lover who

was neither rich, nor handsome, nor socially acceptable. Ariel sang,

"Of his bones are coral made;
Those are pearls that were his eyes;
Nothing of him that doth fade
But doth suffer a sea-change."

The sun had moved past the window and was gone. Upon the page of the Bruce Rogers Shakespeare the print was blurred and dim.



Medical Use of Salt.—In tooth-ache, warm salt and water held to the part, and renewed two or three times, will relieve in most cases. If the gums be affected, wash the mouth with brine; if the teeth be covered with tartar, wash them twice a day with salt and water.

Hagerstown Town and Country Almanack, 1850

On Cutting the Teeth.—It is generally observed, that by far the greatest proportion of children die under the age of two years—this is chiefly owing to their cutting teeth during that period. Hence convulsions, fevers, and in many cities vomiting and purging, of which so many die each year—The fatal consequences might, in very many cases, be prevented by cutting the gums with a lancet or sharp pointed penknife deep enough to feel the tooth.

The Town and Country Almanac, 1822

Cure for the Tooth Ache.—Take a nutgall, break it, put a small piece of the inside into the hole of the tooth, and after being there for half an hour, or an hour, it must be removed, when it will be found to be covered with a white matter—and a fresh piece of nutgall is to be put into the tooth so long as any matter shall be found to come away—and when that ceases to be the case the cure will be found effected.

The American Farmer's Almanack, 1822

William B. Feindt

Lieutenant Feindt, D.C., A.U.S., the fifth graduate the of B.C.D.S. to give his life in World War II, died on June 6, 1944, in the "the Asiatic area."

Dr. Feindt was born on March 28, 1916, in Baltimore. He graduated from Saint Benedict's School in 1930, and from the Baltimore City College in 1933. He received both his predental and his professional training at the B.C.D.S., graduating in 1939. He was a member of the Psi Omega fraternity and of the Gorgas Odontological Society. During the three years between his graduation and his enlistment he practiced with his father, Dr. William Feindt (U. of Md. 1916), at 131 South Broadway, Baltimore.

Lieutenant Feindt received his commission on August 10, 1942. His service record includes assignments at Camp Forrest, 9 months; and Camp Atterbury, 3 months. In September, 1943 he arrived in Oran, North Africa, where he remained about three months. On January 1, 1944, he began his service in India. His last letter to his family, dated May 29 and received on June 3, said, "Have been on the move the last few days. We moved deeper into the jungle and are now in Assam."

Besides his parents, Dr. Feindt is survived by a sister and two brothers, Private Henry Feindt, of the Air Corps, and Frederick, a member of the B.C.D.S. Class of 1945.

Those who knew Feindt as a student will recall him vividly as a studious, congenial fellow who teamed up with his classmate Frank Brown (at present a Captain in the Army) as the Stan Laurel of an inseparable Laurel-Hardy combination.

Of the 65 members of the Class of 1939 the Honor Roll lists 36. The names of two 1939 men are now on the Memorial Tablet: Feindt and Gorsuch.



William B. Feindt

B.C.D.S. SERVICE NOTES

IN PUBLISHING the first Honor Roll list we included the names of all the alumni in the services about whom we had information. Obviously the first listing could not be complete, but as a result of the wide distribution of the December JOURNAL we have received information as to the service records of scores of alumni not named in that issue. Their names will be found in the Honor Roll section of this number.

Capt. "Ike" Sloan, of Dunbar, W. Va., wrote us a fine letter which enabled us to add his name to the roster of the Class of 1937: "My sincere thanks and appreciation for the December, 1943 issue of the Journal. Want you to know how proud I am to read of the great number of alumni giving their services in this great cause. It was especially grand to see that so many of my class are on active duty throughout the war zones. Thus far I've seen service in both the Pacific and the European theatres of operation. Am at present in England where it has been my good fortune to see many classmates and other alumni of Maryland."

In his corking good book *Here Is Your War* (Henry Holt and Co., 1943) Ernie Pyle describes an American evacuation hospital in North Africa operated by a unit from Charlotte, N. C. The group went into active service in April 1942 and arrived in England in August. This outfit came ashore in assault boats on the day after the occupation of North Africa and went immediately to work setting up a tent hospital.

Pyle's interesting and thorough account of the work of the unit includes two items of special interest to us:

The hospital's supply officer was Captain William F. Medearis. He was a Charlotte bigwig. They said he owned all of Main Street, plus half the real estate and all the laundries. He was national secretary-treasurer of the Laundry Association. He turned down a lieutenant-colonelcy in Washington in order to go to Africa with his friends.

There was also the dentist's office, in one end of a surgical tent. The chair was just a hard green metal one, tilted back. There were no arms to hold to when hurt. The drill was run by the dentist pumping on an old-fashioned treadle. Yet the dentist, Major Vaiden Kendrick, said he could do anything he did back home in Charlotte.

The Captain mentioned by Pyle is "Buck" Medearis of the Class of 1923, who gave up a very successful professional career in order to devote all his time to numerous profitable business interests. The Major graduated from the B.C.D.S. in 1932 with a splendid academic record that was matched by his classmate brother Vance.

According to our records, Lt. Harry Aks '37 has been in the Navy Dental Corps for about three and a half years. The last time we saw Harry, several months ago, he was assigned to Bainbridge. After an introductory assignment at the Norfolk Naval Air Station Lt. Aks' next tour of service was on the *George Elliott*, which was sunk August 8, 1942, off the Solomon Islands. Harry is reticent about his experiences on the *Elliott*, but we know that he was exposed to great danger during the action that resulted in the sinking of his ship and the transfer of the survivors to another ship.

Lt. "Jack" Wieland '42, who for over a year has been in the Southwest Pacific with a Seabee Battalion, writes:

Being the only dental officer with this outfit and being usually many miles from any other dental set-up, I have found it a constant source of pleasure to improvise and supplement my operating facilities in order to render the personnel the finest dental care of which I am capable.

Of all the dental officers I have met none seem so well prepared by schooling to meet the standards demanded of them by modern dentistry as the graduates of the B.C.D.S.

The electric motor of our Dental Department was salvaged from a discarded washing-machine. The cabinet was built by my dental assistant out of scrap lumber.

In July the *Baltimore News-Post* published an article about Lt. Morton Goldiner '33, written by its war correspondent from England. Lt. Goldiner had been in England since January, installing dental offices in A.A.F. stations, and teaching special technique to the dental officers who man them.

In July Captain Eugene Baish '27, on duty at an army hospital in France, wrote an unusually interesting and informative letter to his father, William Baish (B.C.D.S. 1909), of Baltimore. "Gene" told of hunting rabbits with neighboring French farmers. Referring to his hospital work, he wrote that "they all come here from generals to seabees. How we manage to get all the work done, I don't know. I have begged, borrowed and stolen technicians and assistants to make up prosthetic teams and to fill up the clinical section."

I never expected anything like this and I am quite sure they never anticipated it. The hard tack breaks dentures right and left, and we have a landslide of repairs as well as replacements of lost cases, broken teeth, etc. We work from dawn to 10, 11 and sometimes midnight.

My lab boys are wonderful. I awakened this morning at 2 o'clock to find them still at work in the lab. One does not mind, for there is a great thrill in knowing that you are doing

so much for the fellows that are going to face the hell up there in the front lines.

Whenever anybody starts griping about the hard work, I just take them on ward rounds and let them have a look. It usually shuts them up quick.

Captain Alberto Walsh, '43 (March) has been stationed in Panama since January. He had previously served at two stations in Puerto Rico.

In June, Lee McCardell, correspondent of the *Baltimore Sunpapers*, then with the 313th Infantry in Normandy, reported the adventure of Captain Herbert Brown '36, of Stamford, Connecticut.

Brown, acting regimental surgeon, became lost and drove four American ambulances smack into a German position. The unit had gone forward to pick up wounded Joes. A wrong turn put them on a hard-surface road. Nobody stopped them and the road looked good, so they just kept going. Soon Capt. Brown noticed some unbreached enemy barbed-wire defenses and realized that La Glacerie was still in German hands.

"Turning his ambulances around he started back, passing through a German army installation where a whole flock of Jerries, evidently anxious to call it quits, waved frantically to him from the ditch in which they had taken cover. Capt. Brown had no means of bringing them in, so he waved back and came on."

Later, he told the regimental adjutant and the communications officer about the Germans he had seen. They found about 60 of them and brought in all those who could walk.

Three of our graduates got together in Iceland back in October 1942. As reported in the *White Falcon*, printed by the American Forces in Iceland, Seeley '29, Schunick '34 and Criss '42 met for the first time at the Officers' Club, where

they had a B.C.D.S. reunion featured by much bending of elbows and a heavy bull session.

Lt. Commander "Jerry" Cullen '41, according to a news report of May, is with the Seabees in the British Isles. While in England he was assigned to a hospital for a course in plastic surgery.

A Marine Corps combat correspondent writing from Bougainville to the Baltimore *Evening Sun* in February gave an exceptionally good account of a Navy dentist working under the difficulties imposed by the proximity of active warfare. The value of the story is accentuated by the fact that the dentist was Lt. "Ronnie" Lawrence '41, of Elkton, Md. Lawrence was a member of that swell 1941 foursome with Caldwell, Hewitt and Schultheis, all of whom are now in the services.

"The drill was biting deep into my crumbling molars when the sirens began to wail. You could hear the two Zeros as they came across the lantana. Chattering machine guns and barking ack-ack sounded a hoarse chorus of protest. The Japs swung back and the firing renewed. Young navy Lt. Ronald Lawrence and I took off for our foxholes.

"When it was comparatively quiet again I crawled out of the foxhole and into the chair again, and Lt. Lawrence, who administers to the dental needs of the marines here, resumed his drilling. The raid was only an incident in the day's work in this dental office, probably the nearest to any front line.

"The 'office' is actually a storage tent. From the hills comes the sound of frequent explosions as marine artillery pumps shells into the Jap lines and patrols move forward with the crack of machine-gun fire.

"Lt. Lawrence sterilizes instruments in

water heated by a plumber's blow-torch, and his drill is turned by an ancient model foot engine, nimbly operated by a navy hospital assistant. Extractions, fractures, fillings and everything except plates are included in Lt. Lawrence's routine.

"His practice has taken him to a growing list of South Sea islands, including Samoa, New Caledonia, Guadalcanal and Bougainville."

Another appreciative letter came to us in May from Lt. "Howie" Weiss '42 (A.P.O. 557, % Postmaster, N. Y. C.) assigned to the 2nd Station Comp. S.Q.D., then in England.

"I was very happy to receive the JOURNAL out here in Merrie Ole England. It brushed away my loneliness for a while and brought me back to the old days at School. I was thrilled to see familiar names in print and intend to write to those boys I know who are in England. You have done a fine job on the December, 1943 issue; it's amazing how you managed to get all that information together. Thank you again for recalling pleasant past experiences."

Many of our men in the navy have seen a good deal of action. Lt. "Eddie" Jerdon '25, assigned to ship duty, was in the thickest of the fighting during the campaign that resulted in the occupation of Sicily. His report indicates that he has an excellent talent for observing and recording the highlights of his experiences. The action described here occurred over a year ago, but the story of it is darn good reading for any time.

"The newspapers had been screaming about the coming Invasion for many weeks; the North African Air Force had been strewing death and destruction all over Sicily during the same time. We of the attack are on our way. This

ship, an attack transport, is part of one task force that participated in the initial assault, carrying the Rangers and engineers to the beach at point of attack.

"That day—July 9th—was the roughest day I had seen in six months of sea duty. The defenders had already won the first round. More than three-fourths of our soldiers were sea-sick upon arrival.

"At about 11:00 P.M. that black Friday night we were stealthily approaching the beach at Gela, Sicily. We could see through the darkness the continuous bursting of bombs from our planes along the shore. These kept roaring over our heads, flashing their identification lights. I shall never forget the first one that came over. I could see it silhouetted in the star light not 200 ft. over the water. I didn't know whether it was friend or foe. And there I was, terrified, halfway up the radar-mast where I had climbed to get a better view, expecting momentarily to have a bomb dropped right down my throat.

"From that time on life took on a progressively more harrowing aspect. Midnight passed and the H-hour approached. The suspense was much more terrible for the Rangers and our boat crews and officers who had to take them into the beach than for those of us who remained aboard. Suddenly in the horizon there is a blinding flash followed a little later by a bone-shattering roar. One destroyer gone! I stood on the sun deck and watched it all. A coldly beautiful and deadly sight was now presented by our cruisers which went immediately into action. For miles along the shore great search-light batteries began to sweep over us and there we were, plainly visible, sitting like ducks on the water only four miles off the beach. Then the cruisers started. With each salvo, out went a light; in ten minutes all was dark again. Next came the shore batteries,

each of which was picked off by the cruisers like bottles off the back fence. In the darkness each salvo could be seen in flight, like an echelon of great flying birds driving straight to the mark.

"H-hour finally came: July 10, 2:45 A.M. The boats were loaded and the invasion was on. Wave after wave of boats were swallowed up by the darkness, on the other side of which was more darkness plus the furies of hell. Thousands of men from hundreds of small boats and barges poured onto the beach.

"Saturday morning the casualties began coming aboard. For the next 48 hours none of the medical department got any sleep. I lost all sense of time, and now, as then, of all the things I did I can't tell you which day it was or what time of day. It is all a great blur on my memory.

"We had things pretty well under control, medically speaking, by the third day, and it would have been an excellent opportunity to grab some sleep were it not for certain disturbing circumstances. During the morning of that third day a flight of ten bombers came over and dropped their deadly eggs all around the anchored ships. The one right next to us got a direct hit, but we were unscathed. Later in the day thirty-six more bombers appeared over us. I was in the Surgical Ward examining a transfusion apparatus when I heard our anti-air craft guns go into their dance on topside. I heard some other loud explosions which didn't bother me much at the time. In fact, I was in the middle of some facetious remark when—WHAM—came the most soul-shattering explosion I've ever heard. I could literally feel the color drain out of my face; my hands trembled completely beyond my control. I put my hands on the top bunk and leaned there so that the boys could not see how shaken I was. Someone yelled that we'd been

hit. I certainly believed it, wondered vaguely how badly, and how many were hurt, and if we should have to abandon ship. All this occupied but a few seconds, and within two minutes the boys who had been hit came streaming back to the sick bay. The blood had come back to my head by this time and the real situation began to take the place of my confusion. We hadn't been hit at all, but had been completely encircled by a string of 6-8 bombs, one of which hit the water about thirty-five feet from the ship. I acquired a new respect for the term 'near miss' which I had always scorned. This near miss blew several holes in our hull and sent more than a dozen men scurrying back to the sick bay with shrapnel wounds.

"That night was the worst night I ever spent. The bombers came over again, and while we couldn't see what was happening, we could certainly hear it and imagine what a soft target our ship made, illuminated as it was by the myriads of flares overhead. The suspense was terrific—throughout the night. The following day was our last in Gela. We weren't doing anything—just lying at anchor taking casualties aboard. The ship's work of unloading men and supplies had been finished two days before. We were pretty angry at being forced to act as a target for German bombers when our work was all done. But, after two heart-breaking postponements of sailing time, we finally got under way on the evening of the fourth day, back to the safety of North Africa."

A small but vigorous '35 reunion was held at Moody Field down in Georgia when two Irishers got together after nine years of separation. Capt. John Mahoney was joined at the Station Hospital at Moody by his old B.C.D.S. pal, Lt. John Houlihan.

In August Capt. Mario F. Ramirez '42, of San German, P. R., stationed in the Canal Zone, wrote that he had met three other alumni at a meeting of the Canal Zone Dental Society: Capt. "Dick" Vitolo '41, Capt. Alberto Walsh '43 (March), and Lt. (j.g.) "Randy" Hawkins '41.

From the P.R.S. of the Fifth Army in Italy came news about Capt. Isidore Legum '39 (A.P.O. 34, % Postmaster, N. Y. C.), assigned to the 34th "Red Bull" Division.

"Captain Legum has been very busy taking care of frontline artillerymen needing dental treatment, but he has found time to do extractions for many Italian people who have come to him for alleviation of pain. Most Italian dentists have fled from areas along the Fifth Army front. Others are unable to practice because of lack of supplies."

From New Guinea there came in August a newsy letter from Lieut. Henry Gemski '38 (15th Spec. Constr. Batt., % F.P.O., San Francisco). Accompanying the letter were several snapshots and one of the pound notes the Japs had planned to use in Occupied Australia. "My hands have been infected for the second time by a tropical fungus disease the doctors out here call pomphylis. Skin infections are predominant and the men are suffering more from skin infections than from malaria."

A September communication from Capt. H. H. Weisengreen '25 (0504952, 49th Station Hospital, A.P.O. 557, % P.M., N. Y. C.) says that he is in charge of the Oral Surgery Division of a station hospital in England. In addition to handling cases of war injuries of the jaws and face, Capt. Weisengreen has been keenly interested in the areas of Ireland,

Scotland and England that he has been able to visit.

Capt. "Dan" Bixby '42 (45th General Hospital, A.P.O. 367, % P.M., N. Y. C.) wrote in July: "Our clinic is fine. We have new electric engines, our X-ray machine is of the latest type, and we have a well equipped laboratory. Our living quarters are in a very modern Italian apartment house: elevator service, tile bathrooms, pleasant bedrooms and every desirable feature for comfortable living."

Major "Al" Eskin '31 (5th Aux. Surgical Group, A.P.O. 339, % P.M., N. Y. C.) wrote from Somewhere in England in August. Ever a keen observer "Al" has been seeing a good deal of the English countryside and becoming acquainted with the rank and the file of the people. He feels fortunate to be doing the work for which he was specially trained and considers his experiences as splendid preparation for the day when he will return to practice.

Capt. "Irv" Weiner (0482547, 32nd Station Hospital, A.P.O. 364, % P.M., N. Y. C.) reported in February that after a year of overseas duty in Africa and Italy he was still getting a big kick out of his work. "We are very well taken care of over here. The living quarters are very good, the food is excellent, and there is plenty of entertainment: operas, movies, stage shows, and even dances. Have met several Maryland men on this side, and we had a good time reminiscing."

Another appreciative reaction to the December JOURNAL came from Capt. Isadore Fox '37, stationed at the Valley Forge Hospital: "I have just received my copy of the Journal today, and I

experienced such a deep feeling of satisfaction and pleasure from reading it that I want to let you know of what wonderful value it is to myself and, no doubt, to all the other alumni who received it."

We have heard frequently from Capt. "Marty" Stern '43 (March) (0-1715685, 550 Med. Hosp. Ship Platoon, E.A.P.O., % P.M., N. Y. C.) He has been able to see a good deal of England and southern Italy. On his last visit to the School "Marty" received an Alert while he was in the middle of getting a tooth filled.

A new addition to the Honor Roll is Lt. (j.g.) "Bob" Betts '41, U.S.P.S. "Bob" must be in Trinidad, for he writes of chumming around with "Bert" Chan-Pong '39 and Vernon Marquez '35. According to "Bob" these alumni "have the two best dental practices on the island." To round out a quartet is another alumnus, Lt. (j.g.) "Nick" Giuditta '38, U.S.P.H.S.

Capt. Taffy Kobrinsky '35 of the Canadian Army D.C. received his honorable discharge a year ago because of illness.

From Lt. Col. Brice Dorsey '27 (A.P.O. 923, % P.M., San Francisco) we learn (July) that he is still in Australia, assigned to a General Hospital. Associated with him are Capt. Carl Bailey '38 and Capt. Wallace Inman '36. Their very capable nurse is Lt. Lolah Marshall who took one year of the predental course before entering the University's School of Nursing. That combination makes a grand team. From the picture of the group sent by Brice we conclude that they are all in excellent health and fine spirits.

All of the dental officers in the Johns Hopkins University Base Hospital in

Sydney, Australia, are Maryland graduates. The veterans of the group are Major Hammond Johnston '32, Capt. Wilbur Burton '37 and Capt. Eugene Lyon '38. They were joined in the spring by Lt. Lewis Toomey and Lt. Joseph Tighe, both of the 1942 Class.

Since Pearl Harbor several hundred of our alumni in the services have visited the School. The fellows like to browse around the building, talk with Dr. Robinson and Miss Toomey, and chat with faculty members. Now and then a chap will find a classmate on the teaching staff who will make his visit an especially pleasant experience. Whenever possible the service record of each homecoming alumnus is checked by the Dean's Office for the School records.

One of the recent visitors was Lt. Col. "Sam" Bryant '32, a member of the

University of Maryland Base Hospital Unit No. 142 that left here in May 1942. The Unit is stationed on a Pacific island. At first the dental group worked under crude conditions and were forced to do a good deal of improvising. Now the men are well equipped to do all kinds of good dental work. "Sam" brought back a souvenir given him by an appreciative patient who had been wounded on Guadalcanal—a Japanese dental kit. Another souvenir was waiting for him at home. The *New Zealand Golf Illustrated* had sent him a mounted golf ball. The ball was the one "Sam" drove for a hole in one on the course of the Auckland Club back in June, 1942.

"Sam" left behind him on Fiji two alumni who enlisted in the Unit with him: Capt. "Doug" Browning '34, who is now in charge of the dental clinic, and Capt. "Jack" Cronin '36.



A method to strengthen the GUMS, and fasten loose TEETH.—Dissolve an ounce of myrrh, as much as possible, in half a pint of red port wine, to which add the same quantity of oil of almonds, and wash your mouth with this liquid every morning.

For Tooth-Ache.—The root of yellow water flower-de-lac rubbed on the tooth which is painful, or chewed in the mouth, in an infant, as if by a charm, drives away the pains of the teeth, arising from what cause soever.

To prevent the Tooth-Ache.—After having washed your mouth with water, as cleanliness and indeed health requires, you should every morning rinse the mouth with a tea spoonful of lavender water; this simple and innocent remedy is a certain representative, the success of which has been confirmed by long experience.

To whiten the Teeth.—Dip a piece of clean rag into vinegar of squills, and rub the teeth and gums with it; it not only whitens, but fastens and strengthens the roots of the teeth and sweetens them—or rub them with nettle, or tobacco ashes, or with vine ashes, and a little honey.

Ellicott's Maryland and Virginia Almanac, 1789 (Baltimore)

ALUMNI NEWS

PERSONALS

Dr. William James Cirrito '43 (March) married Sophie Rita Brenny on June 1, 1944.

Dr. Sumner D. Hirshberg '44 married Mollie Barbara Carliner on August 3, 1944.

Dr. Daniel A. Savini '44 married Muriel Ann Krieger on August 12, 1944.

Dr. Lawrence J. Olsen, Jr. '44 married Josefina Maristany on August 17, 1944.

Dr. Thomas C. Conway '28 married Viola L. Woods on September 15, 1944.

Dr. and Mrs. Felix Thilo Trommer '43 (November) announce the birth of a son, Paul K., on March 18, 1943.

Dr. and Mrs. John Paul Barker '38 announce the birth of a son, John Paul, Jr., on March 11, 1944.

Capt. and Mrs. Frank Jackson Bryce '43 (March) announce the birth of a son, Frank Jackson, Jr., on April 6, 1944.

Dr. and Mrs. Dorsey R. Tipton '39 announce the birth of a daughter, Barbara Ann, on June 8, 1944.

Capt. and Mrs. Russell P. Smith '43 (March) announce the birth of a son, Russell P., III, on June 12, 1944.

Lt. (j.g.) and Mrs. Glenn D. Steele '42 announce the birth of a son, Glenn Daniel, Jr., on June 23, 1944.

Dr. and Mrs. Ernest B. Nuttall '31 announce the birth of a daughter, Joyce Ellen, on August 1, 1944.

Lt. (j.g.) and Mrs. Edmund L. Bohne '41 announce the birth of a son, William Thompson, on August 17, 1944.

Capt. and Mrs. Daniel L. Farrell '41 announce the birth of a son, Joseph Lawrence, on September 16, 1944.

OBITUARY

Dr. Harry A. Free (U. of Md. 1889) of York, Pennsylvania, died April 9, 1942.

Dr. Parke P. Starke (U. of Md. 1887) of Ashland, Virginia, died April 30, 1943.

Dr. C. E. Callery (B.C.D.S. 1913) of Bristol, Rhode Island, died in June 1943.

Dr. Chester B. Gifford (U. of Md. 1906) of Norfolk, Virginia, died in June 1943.

Dr. Frank K. White (B.C.D.S. 1885) of Phillipsburg, Pennsylvania, died August 5, 1943.

Dr. Bart W. Cubbedge (B.C.D.S. 1887) of Guyton, Georgia, died August 18, 1943.

Dr. J. Newton Giddens (B.C.D.S. 1892) of Meridian, Mississippi, died September 9, 1943.

Dr. Rudolph T. Turcotte (B.C.D.S. 1914) of Waterville, Maine, died September 10, 1943.

Dr. Herbert E. Keller (U. of Md. 1914) of Jersey City, New Jersey, died October 10, 1943.

Dr. Samuel H. Homel (U. of Md. 1933) of Baltimore, Maryland, died October 13, 1943.

Dr. J. Harry Deems (U. of Md.) of Brooklyn, New Jersey, died in October 1943.

Dr. M. W. Bouchard (U. of Md. 1926) of Fort Kent, Maine, died November 21, 1943.

Dr. Orville C. Hurst (U. of Md. 1924) of Baltimore, Maryland, died November 28, 1943.

Dr. Winfield S. H. Martin (B.M.C. 1905) of Rutherford, New Jersey, died December 6, 1943.

Dr. Frederick Henry Stegman (B.C.D.S. 1919) of Baltimore, Maryland, died December 13, 1943.

Dr. Joseph M. Berwald (B.C.D.S. 1911) of Elizabeth, New Jersey, died December 16, 1943.

Dr. C. Albert Ruppertsberger (U. of Md. 1914) of Baltimore, Maryland, died December 20, 1943.

Dr. James W. Simpson (U. of Md. 1892) died December 25, 1943.

Dr. Lewis J. Harmanson (B.C.D.S. 1882) of Onancock, Virginia, died December 25, 1943.

Dr. J. B. LaFlamme (B.C.D.S. 1908) of Pawtucket, Rhode Island, died January 23, 1944.

Dr. J. Edgar Myers (U. of Md. 1901) of Westminster, Maryland, died January 26, 1944.

Dr. George V. Milholland (B.C.D.S. 1891) of Baltimore, Maryland, died January 28, 1944.

Dr. James F. Dobson (B.C.D.S. 1915) of New Britain, Connecticut, died January 28, 1944.

Dr. James T. Coroso (B.C.D.S. 1913) of Hartford, Connecticut, died March 23, 1944.

Dr. Wilbur A. Charron, (U. of Md. 1909) of Worcester, Massachusetts, died March 25, 1944.

Dr. James Kendall Burgess (B.C.D.S. 1891) of Montclair, New Jersey, died March 28, 1944.

Dr. Eugene F. Briggs (U. of Md. 1903) of Bangor, Maine, died March 31, 1944.

Dr. Elvie S. Boyle (U. of Md. 1891) of Port Deposit, Maryland, died April 8, 1944.

Dr. Joseph H. Scanlon (U. of Md. 1913) of Pawtucket, Rhode Island, died May 4, 1944.

Dr. Charles I. Highstein (U. of Md. 1921) of Baltimore, Maryland, died May 10, 1944.

Dr. John W. D. Maier (B.C.D.S. 1878) of Baltimore, Maryland, died May 15, 1944.

Dr. Albert J. Allaire (U. of Md. 1910) of Brockton, Massachusetts, died May 17, 1944.

Dr. John F. Keeley (B.C.D.S. 1917) of Fall River, Massachusetts, died May 22, 1944.

Dr. Ralph Ray (U. of Md. 1912) of Gastonia, North Carolina, died July 5, 1944. During the first World War he served 11 months overseas with the Thirtieth Division. Dr. Ray was discharged in 1919 with the rank of captain.

Dr. S. P. Purvis (B.C.D.S. 1907) of Salisbury, North Carolina, died in August 1944.

Message to the Alumni

THE Life Membership Committee, under the chairmanship of Dr. Arthur Bell, reports a considerable increase in the Life Membership Fund. As this Fund is growing rapidly, the committee feels that the administration of it should be placed in the hands of a rotating board of trustees and that constitutional provision should be made for the selection of such a board. At present the constitution provides that "Such money paid in under the Life Membership plan shall be retained in a Special Life Membership Fund whose capital shall be kept invested and from which only the interest may be expended for working projects, i.e., research, fellowship, etc."

Any comment that you may wish to make would be welcomed either by Dr. Bell or by me.

*Fraternally,
F. NOEL SMITH, President
National Alumni Association
Baltimore College of Dental Surgery
Dental School, University of Maryland*

Message from Dean Robinson

EVERY graduate of the Baltimore College of Dental Surgery should become a member of the National Alumni Association. Appreciation, loyalty, devotion and service are characteristics of the professional man; these attributes should impel the dental graduate to give his fullest support to his alma mater. During recent years the graduates of the Baltimore College have shown an ever-increasing interest in their alma mater; this attitude has resulted in a growing alumni membership. In order to expand its activities the Association has wisely arranged a Life Membership plan to which all graduates are invited to subscribe. The younger men, especially, should become life members of the Association. To do so is to discharge their personal obligations, to insure their continuing interest in their alma mater and to offer encouragement and support to the Alumni Association in making its activities truly successful. One of the strongest assets of an educational institution and one which has marked the progress of our leading colleges and universities is an interested, active, purposeful alumni association. I bespeak your hearty support of your Alumni Association and your School.

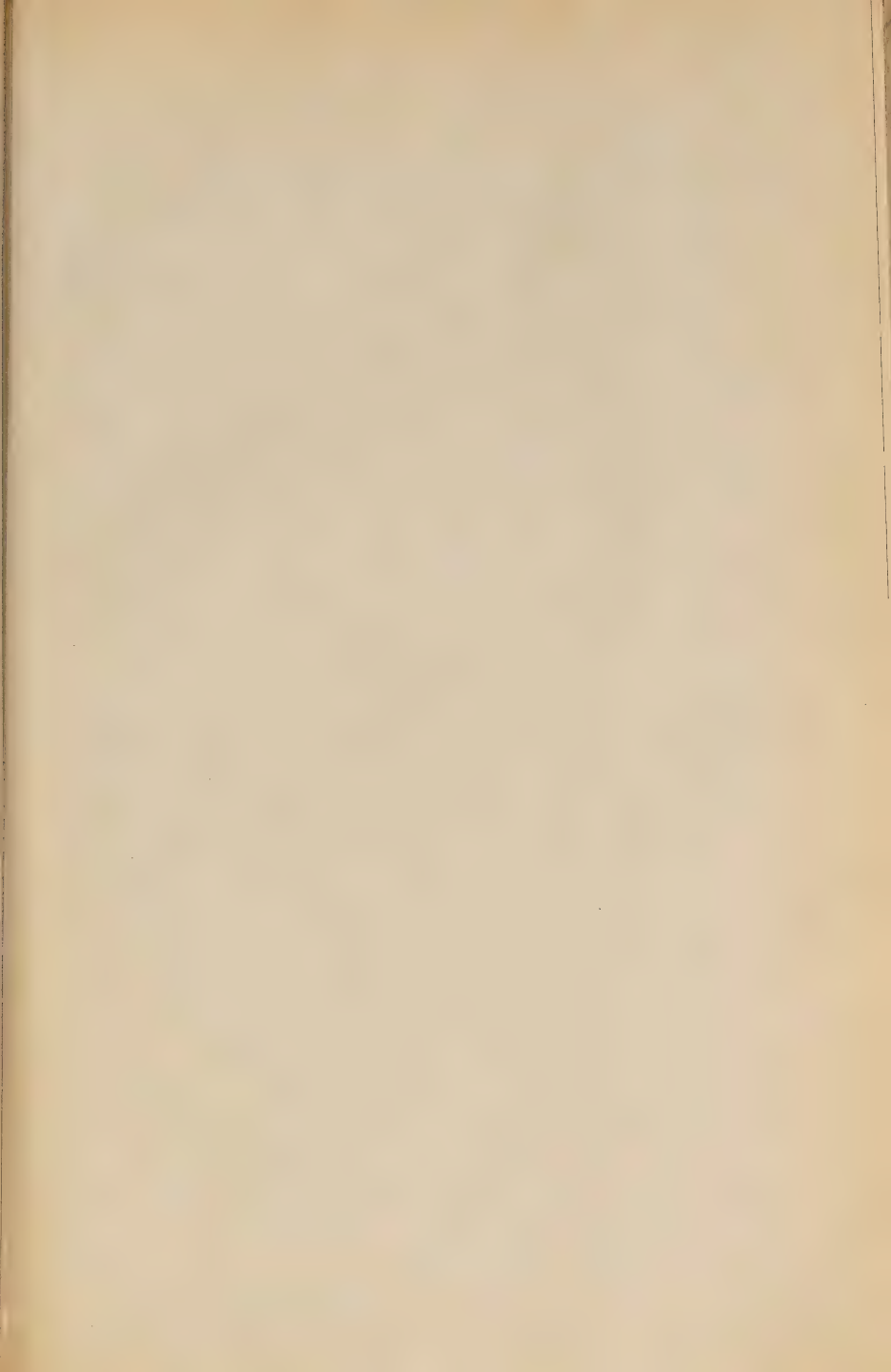
ANESTHESIA:

Three Opinions

William Henry Atkinson, prolific writer, successful teacher, brilliant orator, and great leader, at 1872 meeting of the American Dental Association: I cannot give my vote to those resolutions [anent "Wells National Testimonial Fund"] for reasons other than humanitarian. I think anesthesia is of the devil, and I cannot give my sanction to any Satanic influence which deprives a man of the capacity to recognize law. I wish there were no such thing as anesthesia. I do not think that men should be prevented from passing through what God intended them to endure. For these reasons I cannot support the resolution, though I am always ready to relieve a suffering family. My affections are with them, but not my higher nature. [The resolutions were adopted.]

J. Foster Flagg, father of "The New Departure": Anesthesia is death! Because it does not prove fatal every time, do not let us think that it is not harmful. It sows disease; it produces a condition favorable to such diseases as chorea and other nervous affections, which will unfit for business, society, or any of the active duties of life. The asylums are full of cases of these diseases. Men are innocently (rather than ignorantly) swung down to the jaws of death and back again. We have to do it, but it is little less than death. The patient is never the same after.

James Truman, at the celebration, sponsored by the American Dental Association, of the fiftieth anniversary of the discovery of modern anesthesia, held in Philadelphia, December 11, 1894: When we contemplate the past history of the world, the horrors of the battle-fields, the terrors of the hospitals, and the accidents of life, the mind falters in its attempt to grasp the aggregate of human misery. Who can translate this into words suitable for modern comprehension? This wail of the ages was voiced in the Garden of Gethsemane, when the Great Master of human thought, in anticipation of the cruel agonies of the cross, lifted up his voice and prayed, "Father, let this cup pass from me!" Eighteen centuries passed into oblivion with no response; but near high noon of the nineteenth, in the new world of Columbus, in a humble home in Hartford, there arose a "still small voice" sounding above this wilderness of suffering. It was wafted over the deep waters, echoed and re-echoed in joyous acclaim throughout the world: "Lo, the cry of agony from the surgeon's knife is silenced forever."





THE Journal

OF THE
BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND



A SUMMER COMMENCEMENT	1
DENTAL EXHIBITS	3
ALUMNI HONOR ROLL: ADDITIONS	4
PROMOTIONS	9
AVIATION DENTISTRY	12
JOHN T. WIELAND '42	23
THE SOPHOMORE CLASS	24
DR. HEATWOLE'S EIGHTIETH BIRTHDAY	27
CASE REPORT: SCORBUTIC STOMATITIS	28
B.C.D.S. SERVICE NOTES	32
STUDENT ACTIVITIES	36
ALUMNI NEWS	40

VOLUME 9

September, 1945

NUMBER 1

THE *Journal*

OF THE

BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND

VOL. 9

No. 1

EDITORIAL STAFF

Editor

GARDNER P. H. FOLEY

Advisory Board

GEORGE M. ANDERSON

BURT B. IDE

J. BEN ROBINSON

Student Staff

J. F. DILIBERTO, Senior, Chairman

M. H. COLECCHI, Senior

N. D. BOOKSTAVEN, Junior

Business Manager

B. A. DABROWSKI

The Journal of the Baltimore College of Dental Surgery is published irregularly by the Faculty, the Students and the National Alumni Association of the Baltimore College of Dental Surgery, Dental School, University of Maryland; and the Grieves Library Foundation of the Maryland State Dental Association.

A SUMMER COMMENCEMENT

FOR the first time in its long history the Baltimore College of Dental Surgery graduated a class in the summer period. As a result of the accelerated program under which the School has been working for several years, the Class of 1944 was graduated on August 10 at commencement exercises held in the Second English Lutheran Church. The Church, located next to the School on Lombard Street, provided an ideal setting. The Commencement Address was given by Dr. Fred G. Holloway, President of Western Maryland College.

OMICRON KAPPA UPSILON

The first event of the Commencement was the annual convocation and dinner of Phi Chapter, held at the Country Club of Maryland on August 8. Rear Admiral Alexander G. Lyle '12, who was presented by Dean Robinson, was inducted as an honorary member. The new members from the 1944 Class were presented by Dr. Ernest Nuttall '31: Charles Hennesey, Jersey City, N. J.; W. Edward Pfeifer, Baltimore; John Mallow, Upper Tract, W. Va.; Casimir Sheft, Passaic, N. J.; David Dosh, Baltimore; Paul Whitesides, York, S. C.; Norval Smith, Baltimore; Lawrence Olsen, Orange, N. J.; Frank Celestino, Westerly, R. I.; Harry Borg, Peekskill, N. Y.; Howard Hester, Englewood, N. J.

Two Alumni members were presented for induction by Dr. Walter Oggesen, '26: Marcus Brucker '21 of Newark, N. J. and Stanley Dosh '35 of Catonsville, Md.

THE SENIOR AWARDS

The annual Awards were presented by Dr. J. Ben Robinson, Dean, at the dinner of the National Alumni Association, held at the Lord Baltimore Hotel, on the night before the graduation day.

University Gold Medal for Scholarship: Walter Hennesey.

Certificates of Honor: Charles Hennesey (Magna Cum Laude), W. Edward Pfeifer (Cum Laude), John Mallow, Casimir Sheft, David Dosh, Paul Whitesides.

Isaac H. Davis Medal for Cohesive Gold Filling: W. Edward Pfeifer. Honorable Mention: Donald Michnoff, Miami Beach, Fla.

Albert S. Loewenson Medal for Full Mouth Operative Restoration: Norval Smith. Honorable Mention: Edward Goldberg, Lynn, Mass.

Alex H. Paterson Medal for Practical Set of Full Upper and Lower Dentures: Oren Gaver, Linthicum Heights, Md. Honorable Mention: Edward Hoffman, Baltimore.

Harry E. Kelsey Award for Professional Demeanor: Conrad Inman, Jr., Baltimore.

Alumni Association Medal for Thesis: David Abrams, Beckley, W. Va. Honorable Mention: Lloyd Church, Mounts-ville, W. Va.

Award (Contributed by James H. Samuel '14) for Best Paper in Dental History: Norval Smith.

Award (Contributed by Lt. Col. Edgar J. Jacques '17) for Meritorious Work in Practical Oral Surgery: Charles Hennesey.

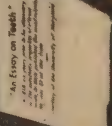
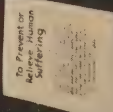
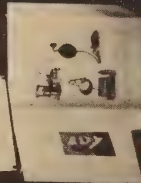
Certificate for Outstanding Work in Practical Pedodontia (American Society of Dentistry for Children): Charles Hennesey.

Keys Awarded for Meritorious Work on the *Mirror* (the student yearbook): Edward Hoffman; Donald Fales, Baltimore; Albert Loewenson, Baltimore; W. Edward Pfeifer; Harold Bulitt, Trenton, N. J.; Theodore Gorfine, Somerville, Mass.

100 YEARS AGO

HORACE WELLS, A DENTIST OF HARTFORD, CONN.
DISCOVERED ANESTHESIA

ANESTHESIA ADVANCED WITH THE COOPERATION OF THE MEDICAL PRESS, DENTAL JOURNAL



DENTAL EXHIBITS AT THE PRATT LIBRARY

GARDNER P. H. FOLEY

In the Enoch Pratt Free Library the city of Baltimore has one of the leading libraries of the country. In many ways the Library contributes effectively to the cultural advancement of the large community it serves. Through the excellent facilities available at the main library and the twenty-seven branch libraries, the Library serves well the students of the B.C.D.S. by supplementing the chiefly professional facilities afforded by our exceptionally good Dental School Library.

A feature of the Pratt Library that has attracted world-wide attention is its display windows. These windows face on Cathedral Street and are observed attentively by thousands of people daily. Under the direction of Miss Kate Coplan the Pratt windows have become a well established Baltimore tradition. During the twelve years' existence of the present Library building, these large and specially designed windows have stimulated the interest of the public in books and also have created interest in many of the subjects that have been given special displays.

At the time of the Centenary Celebration in March of 1940 two windows were used for the display of various items that would contribute to the purpose of informing the public as regards the Story of Dentistry, with emphasis on the founding in Baltimore of the first dental college in the world. The materials for the display were furnished by the School. These Dental Centenary windows attracted a great deal of attention and provided an effective and dignified means of public education through visual media. Dr. Joseph Wheeler, recently retired Librarian of the Pratt, wrote the Chairman of the Publicity Section of the Dental Centenary Committee a highly commendatory letter in which he commented on the excellent effects achieved by the Centenary exhibits at the Pratt.

The window illustrated on the facing page was used during three weeks of late November and early December to call the attention of the public to the Horace Wells Centenary. The materials were supplied by the School; the display was arranged by Miss Coplan. A picture of the window was sent to Hartford and a request came from the Centenary Committee there for the use of the display in the window of a department store. The Baltimore Wells exhibit was set up in the city of Wells' discovery and displayed during the period of the Centenary Celebration at Hartford.

The brief article and its accompanying picture are published because of the writer's belief that alumni in other cities may follow the example of their School in making use of the excellent publicity values of dental exhibits such as those presented at the Enoch Pratt Library.

HONOR ROLL OF ALUMNI IN ACTIVE SERVICE

The names on this roster are *additions* to the lists published in the December, 1943 and the November, 1944 numbers of the JOURNAL. The editor has received several letters from wives and parents of alumni in the service calling his attention to omissions; however, in each case the correspondent had failed to note the subject's name in a previously published list. The Honor Roll now lists 737 alumni who are or who have been in the services. The list below contains 142 names; it does not include any member of the 1945 Class, for that group will be listed in the next issue. The editor wishes to give Miss Elizabeth Disney of the School Office the major share of credit for the maintenance of the Alumni Service Records. The JOURNAL lists are transcripts of those Records.

1916

Lt. Col. P. F. Schaffer, Chief of Dental Service, A.P.O. 244, % Postmaster, San Francisco, California.

1923

Capt. William F. Medearis.

1924

Major Orland F. Leighty, 0-274041, A.P.O. 28, % Postmaster, New York, New York.

1927

Lt. J. H. Demarest, USNR, % Fleet Post Office, New York, New York.

1929

Major C. W. Buttermore, 0-519543, A.P.O. 152, % Postmaster, New York, New York.

Capt. Hugh W. Eadie, 0-521885, Station Hospital, George Field, Lawrenceville, Illinois.

Capt. James P. Lawlor, 0-522220, B.O.Q. 505, C.R.S., Camp Atterbury, Indiana.

Capt. Cord Meyer, Jr., 0-1684119, 1020th AAF Base Unit, Helen Mar Hotel, Miami Beach, Florida.

Lt. Sol Rosen, 0-544749, Station Hospital, Fort Leonard Wood, Missouri.

1930

Lt. Com. James F. R. Burns, USNR, Dental Dispensary, Navy 717, % Fleet Post Office, San Francisco, California.

Capt. Irwin Gerstein, Station Hospital, Army Air Base, Columbia, South Carolina.

Lt. Julius Miller.

1931

Capt. James F. Carbone, 0-528604, A.P.O. 489, % Postmaster, New York, New York.

Lt. Edgar B. Reese, Station Hospital, Camp Gordon, Johnston, Florida.

Capt. J. Dan Wasilko, 0-1695098, A.P.O. 340, % Postmaster, New York, New York.

1932

Lt. George T. Grosshans, USNR, U. S. Naval Hospital, S.O.Q. Ward 9, New Orleans, Louisiana.

Lt. Francis Muir, 0-544949, Regional Hospital, Camp Blanding, Jacksonville, Florida.

Lt. J. L. Vajcovec, Miller Field, New Dorp, Staten Island 6, N. Y.

1933

Lt. William G. Clark, 0-527390, A.P.O. 583, % Postmaster, New York, New York.

Capt. Arlington D. Flory, (Discharged).
Lt. Ralph J. Gordon, Station Hospital,
Morrison Field, West Palm Beach,
Florida.

Capt. William H. Kirschner, New Station
Hospital, Langley Field, Hampton,
Virginia.

Lt. Richard F. McGuire, USNR, A.P.O.
207, % Fleet Post Office, San Francisco,
California.

1934

Capt. Alfred E. Carhart, 0-473181,
A.P.O. 26, % Postmaster, New York,
New York.

Lt. Murray M. Mimeles, 0-523589,
A.P.O. 528, % Postmaster, New York,
New York.

Capt. Victor M. Romano, U. S. Air
Corps, Westover Field, Massachusetts.

Lt. Jean D. Ross, USNR, USN Preflight
School, St. Marys College, California.

Capt. Milton L. Taubkin, 0-1692399,
A.P.O. 559, % Postmaster, New York,
New York.

Lt. Jack Yerich, 0-543394, Med. Det.
A.A.B., Pueblo, Colorado.

1935

Capt. Samuel Beckenstein, 0-508642,
Regional Hospital, Dental Clinic #2,
Fort Francis E. Warren, Wyoming.

Lt. John C. Bodnar, 0-544284, Dibble
General Hospital, Menlo Park, Cali-
fornia.

Lt. Clifford O. Hills, Station Hospital,
Fort Niagara, New York.

Lt. (j.g.) Isadore L. Singer, U.S.N.T.C.,
Bainbridge, Maryland.

Lt. Brainerd F. Swain, % Fleet Post
Office, San Francisco, California.

1936

Capt. I. Norton Brotman, 0-533159,
A.P.O. 228, % Postmaster, New York,
New York.

Capt. Michael B. Impresa, A.P.O. 339,
% Postmaster, New York, New York.

Lt. (j.g.) Samuel B. Johnston, USNR,
U. S. Naval Hospital, Shoemaker,
California.

Lt. Otto G. Klotz, U. S. Naval Training
Station, Bainbridge, Maryland.

Capt. Roland P. Leahy, 0-534955, A.P.O.
883, % Postmaster, New York, New
York.

H. Berton McCauley, Jr., USPHS, Sr.
Asst. Dent. Surg. (R), Sheepshead
Bay Hospital, Brooklyn 29, New York.

Lt. Herbert Orman.

Capt. Ralph R. Racicot, 0-529400, A.P.O.
658, % Postmaster, New York, New
York.

Capt. Edward Silverman, 0-528417,
A.P.O. 689, % Postmaster, New York,
New York.

Lt. Herbert Weinstein, Station Hospital,
Ft. McClellan, Alabama.

1937

Lt. Irving Berman, Dental Dispensary,
U.S.N.T.S., Sampson, New York.

Capt. Raymond J. Gaudreau, Station
Hospital, DC 1, Camp Edwards,
Massachusetts.

Capt. David A. Levin, 0-535704, Station
Hospital, Buckingham Army Air Field,
Fort Myers, Florida.

Capt. Milson S. Lubarr, 0-530945, 1075
AAF BU AAF PDC, Sq. E, Unit P,
Miami Beach, Florida.

Capt. Robert A. Reed, 0-1820953, Ash-
ford General Hospital, White Sulphur
Springs, West Virginia.

1938

Capt. Alvin Aaron, Northington General
Hospital, Tuscaloosa, Alabama.

Lt. Nicholas A. Giuditta, USPHS 3116,
2316 Seabury Avenue, Terre Haute,
Indiana.

Capt. William H. Ryan, 0-527345, A.P.O.
153, % Postmaster, New York, New
York.

1939

Capt. Charles F. Labas (Labasauckas),
0-482858, A.P.O. 29, % Postmaster,
New York, New York.

Lt. (j.g.) William J. Noon, Jr., Riverdale
Apts., 218 C, Woodvale Road, Balti-
more 21, Md.

Capt. Irving K. Robinovitz, 0-1686080,
A.P.O. 559, % Postmaster, New York,
New York.

Capt. Bernard Waldman, 0-1683258,
Station Hospital, Army Air Base,
Casper, Wyoming.

1940

Capt. Burton Litchman, 0-1696249,
A.P.O. 35, % Postmaster, New York,
New York.

1941

Capt. Abraham Chernow, 0-513666, Dis-
pensary D.A.A.F., Vandalia, Ohio.

Lt. N. W. Hymanson, 0-521790, Em-
barkation A.P.O., % Postmaster, San
Francisco, California.

Capt. Myron A. Policow, 0-537995,
A.P.O. 558, % Postmaster, New York,
New York.

Lt. Joseph H. Smith, 0-529372, A.P.O.
11283, % Postmaster, New York,
New York.

Capt. Russell Spina, 0-520954.

Lt. John W. Toffic, A.P.O. 228, % Post-
master, New York, New York.

March 1943

Lt. Stanley S. Heller, 0-523867, A.P.O.
5907, % Postmaster, New York, New
York.

November 1943

Lt. Bernard M. Capper, 0-1716234, Re-
gional Hospital, 1326 S.U., Camp Lee,
Virginia.

Lt. Leonard Davitz, 0-1725945, Ships
Comp. Det., ARPE, Newport News,
Virginia.

Lt. (j.g.) John R. Famulari, USNR,
Main Dispensary, N. N. Y., Ports-
mouth, Virginia.

Lt. Alfred J. Frost, 0-1716233, Woodrow
Wilson General Hospital, Staunton,
Virginia.

Lt. Daniel Hurewitz, Station Hospital,
Indiantown Gap Mil. Res., Penn-
sylvania.

Lt. (j.g.) Robert G. Kahn, USNR, %
Fleet Post Office, San Francisco,
California.

Lt. Stanley Katz, 0-1716503, Convales-
cent Hospital, Fort Story, Virginia.

Lt. Jerome Kaye, 0-1715684, 477th Port.
Bn., Hq. & Hq. Det., A.S.F.T.C.,
Indiantown Gap Mil. Res., Penn-
sylvania.

Lt. Joseph Kessler, 0-1715705, A.P.O.
17273, % Postmaster, New York,
New York.

Lt. (j.g.) Donald Kramer, DC,V(G),
USNR, G. North Dental Dispensary,
Naval Training Center, Sampson, New
York.

Lt. (j.g.) Eugene L. Piven, U.S.N.T.S.,
Bainbridge, Maryland.

Lt. (j.g.) Wilbur O. Ramsey, USNR,
Sampson, New York.

Lt. (j.g.) Fred J. Witzburg, USNR,
Acorn Group 44, Advanced Base
Depot, Naval Base, Port Hueneme,
California.

Lt. (j.g.) Edward Zuckerman, USNR,
U. S. Naval Radio Activities, Bain-
bridge Island, Port Blakely, Wash-
ington.

1944

Lt. (j.g.) David A. Abrams, USNR, "E"
North Disp., U.S.N.T.C., Sampson,
New York.

Lt. (j.g.) William V. Applegate, USNR,
"C" South Dental Disp., U.S.N.T.S.,
Sampson, New York.

Lt. William Blumenfeld, 0-1716175, Re-
gional Hospital, DC #2, Fort Knox,
Kentucky.

- Lt. Harry V. Borg, 0-1717769, Winter General Hospital, Topeka, Kansas.
- Lt. Jack Brody, 0-1725193, Regional Hospital, Camp Shelby, Mississippi.
- Lt. (j.g.) David C. Brown, USNR, B.O.Q. 135 B, U. S. Naval Training Center, Great Lakes, Illinois.
- Lt. (j.g.) Walter B. Brown, USNR, Field Med. School, Camp Pendleton, Oceanside, California.
- Lt. (j.g.) Harold R. Bulitt, USNR, B.O.Q. 133 B, U. S. Naval Training Center, Great Lakes, Illinois.
- Lt. (j.g.) Arnold H. Castaline, USNR, U. S. Naval Training Center, Bainbridge, Maryland.
- Lt. Carl L. Catani, 0-1705456, Camp Shelby, Miss.
- Lt. Frank S. Celestino, Camp Shelby, Miss.
- Lt. Hugh M. Clement, Jr., 0-1725138, A.P.O. 4255, % Postmaster, New York, New York.
- Lt. (j.g.) John E. Cockayne, USNR, B.O.Q. 133 B, U. S. Naval Training Center, Great Lakes, Illinois.
- Lt. Theodore H. Craig, 0-1705027, A.P.O. 67, % Postmaster, New York, New York.
- Lt. Elpidio Diaz-Marxuach, 0-1725408, Camp Shelby, Miss.
- Lt. (j.g.) David H. Dosh, USNR, 1665 Rosecrans Street, San Diego 6, California.
- Lt. Charles Epstein, 0-1715300, Dental Clinic #1, Fort Knox, Kentucky.
- Lt. (j.g.) Donald G. Fales, USNR, NATB, Dental Dispensary, Pensacola, Florida.
- Lt. Stanley I. Garland, 0-1725248, William Beaumont General Hospital, Dental Clinic, El Paso, Texas.
- Lt. (j.g.) Oren H. Gaver, Jr., USNR, B.O.Q., 1665 Rosecrans Street, San Diego 6, California.
- Lt. (j.g.) Clarence R. Gerber, Jr., USNR, B.O.Q., 1665 Rosecrans Street, San Diego 6, California.
- Lt. (j.g.) Harold H. Gilbert, USNR, B.O.Q., 1665 Rosecrans Street, San Diego 4, California.
- Lt. (j.g.) Raymond E. Goddu, DC-V(G), USNR, 310 North Avenue, Lake Bluff, Illinois.
- Lt. (j.g.) Saul Goodman, USNR, 404 Glen Avenue, Box 23, Lake Bluff, Illinois.
- Lt. (j.g.) Theodore Gorfine, USNR, B.O.Q. 137 A, U. S. Naval Training Center, Great Lakes, Illinois.
- Lt. Burton Gottfried, 0-1715704, Station Hospital Dental Clinic, Camp Mackall, Hoffman, North Carolina.
- Lt. George A. Graham, Post Dental Surgery, Fort Andrews, Harbor Defense, Boston, Massachusetts.
- Lt. (j.g.) Charles W. Hennesey, USNR, Norfolk Air Station Main Dispensary, Norfolk 11, Virginia.
- Lt. Howard C. Hester, USNR, N. N. M. C., Naval Dental School, Bethesda, Maryland.
- Lt. (j.g.) Edward J. Hoffman, Navy Yard Dispensary, Navy 128, % F.P.O., San Francisco, California.
- Lt. (j.g.) Morton H. Hollander, USNR, Dispensary 27, U.S.N.T.C., Camp Hill, Farragut, Idaho.
- Lt. (j.g.) Conrad L. Inman, Jr., USNR, N.T.D.C., Treasure Island, San Francisco, California.
- Lt. (j.g.) Henry V. P. Keilly, DC-V(G), USNR, Barracks 410, Room 116, U. S. Naval Training Center, Bainbridge, Maryland.
- Lt. (j.g.) Mervyn W. Kellam, Naval Training Center, San Diego 33, California.
- Lt. Harry D. Kiernan, Jr., 0-926512, 841st. Eng. Aun. Bn., A.P.O. 75, % Postmaster, San Francisco, California.

- Lt. John M. Mallow, 0-1745633, S.C.U. 3118, DC-1, Ft. Devens, Massachusetts.
- Lt. (j.g.) William F. Marano, USNR, B.O.Q. 027 B, U. S. Naval Training Station, Great Lakes, Illinois.
- Lt. Joseph R. Massucco, 0-1705512, Box 115, Regional Hospital, Camp Maxey, Texas.
- Lt. (j.g.) Donald M. Michnoff, Box 8, Main Dispensary, Jacksonville Naval Air Station, Jacksonville, Florida.
- Lt. (j.g.) Alfred J. Morini, USNR, Dispensary (D. C.), A.T.B. Coronado, San Diego 55, California.
- Lt. (j.g.) Eugene Moss (Moskowitz), USNR, Camp Pendelton, San Diego Area, Oceanside, California.
- Lt. (j.g.) Lawrence J. Olsen, Jr., USNR, U. S. Naval Training Center, Bainbridge, Maryland.
- Lt. (j.g.) Elliott H. Perlman, USNR, U. S. Naval Training Center, Bainbridge, Maryland.
- Lt. Gabriel S. Petti, 0-1715706, Carlisle Barracks, Pennsylvania.
- Lt. (j.g.) W. Edward Pfeifer, Jr., USNR, B.O.Q.—A-52, N.O.B., N.T.S., Norfolk 11, Virginia.
- Lt. (j.g.) Edward Quat, USNR, Bainbridge Naval Training Center, Bainbridge, Maryland.
- Lt. Artaldo V. Quinones, 0-1726776, A.P.O. 703, % Postmaster, San Francisco, California.
- Lt. (j.g.) Herbert A. Radler, USNR, 232 Renner Avenue, Newark 8, New Jersey.
- Lt. (j.g.) Ellsworth D. Rogers, USNR, Dental Dispensary, Marine Barracks, Parris Island, South Carolina.
- Lt. (j.g.) Daniel A. Savini, USNR, U.S.N.T. and D.C., Camp Peary, Williamsburg, Virginia.
- Lt. William T. Schadel, 0-1745879, Cushing General Hospital, Framingham, Massachusetts.
- Lt. Abbe J. Selman, 0-1716981, A.P.O. 11413, % Postmaster, New York, New York.
- Lt. Robert P. Shapiro, 0-1705900, Annex II, B.G.H., Ft. Sam Houston, San Antonio, Texas.
- Lt. (j.g.) Casimir R. Sheft, USNR, U. S. Naval Training Center, B.O.Q., 1665 Rosecrans Street, San Diego 6, California.
- Lt. Norval F. Smith, Dental Clinic, Veterans Administration Facility, Bronx, New York.
- Lt. Harvey K. Soloff, 0-1716087, A.P.O. 920, % Postmaster, San Francisco, California.
- Lt. (j.g.) Charles H. Stagg, Jr., USNR, U. S. Naval Training Station, Bainbridge, Maryland.
- Lt. (j.g.) Vincent A. Ventriglia, U. S. Naval Training Center, Bainbridge, Maryland.
- Lt. (j.g.) Stanley L. Weinberg, USNR, Receiving Unit Dental Section, Farragut Naval Training Center, Farragut, Idaho.
- Lt. (j.g.) Earl R. Weiner, USNR, U. S. Naval Training Center, Dispensary—Dental Dept., Gulfport, Mississippi.
- Lt. Edward L. Wheeler (Goldberg), 0-1705430, Station Hospital, Camp Edwards, Massachusetts.
- Lt. (j.g.) Paul C. Whitesides, USNR, Dental Dispensary, Marine Barracks, Parris Island, South Carolina.
- Lt. (j.g.) Edward P. Wilson, USNR, Dental Dispensary, Marine Barracks, Parris Island, South Carolina.
- Lt. Murray Yavner, 0-1705320, U. S. Army General Hospital, Camp Edwards, Massachusetts.

PROMOTIONS

(All of these men were listed in the December, 1943 or the November, 1944 issues of the JOURNAL)

1913

Lt. Col. Howard E. Topping.

1922

Capt. Alexander J. Spinner.

1923

Major Edwin K. Devine.

1924

Com. Herbert M. Jones.

1925

Lt. Com. Kenmore E. Merriam.

1927

Capt. E. L. Baish:

Lt. Com. Ralph L. Huth.

1929

Capt. Morris C. Fancher.

Capt. R. D. Grace.

Major Elwood W. Seeley.

1931

Major Christian L. Curry.

Lt. Col. Edgar Gunther.

Major Clarence E. Saunders.

1932

Lt. Col. Hammond L. Johnston.

Capt. Lyman F. Milliken.

1933

Capt. Morton J. Goldiner.

Lt. Com. H. H. Hall.

Major Paul W. Holter.

Capt. Walter J. Kowalski.

Capt. Alexander Levine.

Com. Daryl S. McClung.

Capt. Allen J. Reed.

Capt. Jerome E. Schreiber.

Lt. Merwin A. Todd, Jr.

Capt. Harold F. Waldman.

1934

Capt. G. Harry Aumock.

Capt. Sylvan Caplan.

Capt. Raymond Gillespie.

Capt. William R. Joule.

Capt. Robert R. McLean.

Capt. Joseph F. Pichacolas.

Lt. C. F. Sabatino.

Capt. Marvin R. Thomas.

1935

Lt. W. B. Costenbader.

Capt. Edward J. deKoning.

Major William S. Eramo.

Capt. Julius W. Friedman.

Capt. Aaron A. Guth.

Capt. John J. Houlihan.

Capt. Adolph T. Levickas.

Com. Charles T. Pridgeon.

Lt. Com. Joseph H. Scanlon, Jr.

Capt. Marcy L. Shulman.

Capt. Edward W. Wallwork.

1936

Capt. William A. Fischer.

Capt. Isadore A. Glaser.

Capt. Lawrence Harris.

Capt. Louis Kreshtool.

Capt. Normal F. Myers.

Capt. Walter J. Nelson.

Lt. Gerald M. Niebergall.

Capt. William T. Walsh.

1937

Lt. William R. Casey.

Capt. M. Rubin Colby.

Lt. Richard J. Eamich.

Capt. James A. Fulmer, Jr.
 Capt. Jesse J. Greenberg.
 Lt. Com. E. Linwood Myers.
 Major Gordon S. Pugh.
 Capt. Harry E. Rigin.

1938

Capt. Milton B. Asbell.
 Lt. Bradley B. Barnes.
 Capt. Frank P. Cammarano.
 Capt. David Cooper.
 Capt. Edwin D. Cruitt.
 Lt. Henry J. Gemski.
 Capt. Roland W. Heil.
 Capt. Charles S. Jonas.
 Major Eugene D. Lyon.
 Capt. Craig P. Mathias.
 Capt. Floyd W. Neal.
 Capt. Sterling J. Weigel.
 Capt. Carl V. Westerberg.
 Lt. E. O. Wheeler.

1939

Capt. Samuel Barsamian.
 Lt. Col. Garnet P. Francis, Jr.
 Capt. Leonard N. Goldstein.
 Capt. Harry C. Grove, Jr.
 Capt. Harold E. Plaster.
 Capt. Seymour A. Rabinowitz.
 Major J. G. Rosen.
 Major Erwin E. Shea.

1941

Capt. Frederick Aurbach.
 Capt. Benjamin Birschtein.
 Capt. John S. Callaway.
 Lt. Com. William M. Collins.
 Capt. Morton De Scherer.
 Lt. V. R. Hawkins.
 Capt. S. Martin Karow.
 Lt. Ronald Lawrence.
 Capt. E. Paul McDaniel.
 Capt. Edward A. Mishkin.
 Capt. A. A. Ollman.
 Lt. Com. Edward G. Ross (Rosenberg).

Capt. LeRoy E. Schiller.
 Capt. Harry Sloan.
 Capt. Charles Taub.
 Capt. Erminio R. Vitolo.
 Capt. Jack I. Zeger.

1942

Capt. Andrew J. Amatrudo.
 Capt. Morris Eilenberg.
 Capt. Joseph A. Emburgia.
 Capt. Seymour G. Hyman.
 Capt. Seymour Koppelman.
 Capt. Henry R. Lasch, Jr.
 Capt. Jason R. Lewis.
 Lt. (j.g.) Normal R. Nathanson.
 Capt. Raymond T. Ouellette.
 Capt. J. Ralph Reynolds.
 Lt. Glenn D. Steele.
 Lt. C. J. Stoopack.
 Capt. Lewis C. Toomey.
 Capt. Edwin B. Waltman.
 Lt. H. F. Watsky.
 Capt. Howard G. Weiss.

March 1943

Capt. John C. Carvalho.
 Capt. Oscar Check.
 Capt. Leo J. Czachorowski.
 Capt. George M. De Young.
 Capt. James V. DiTrollo.
 Capt. Sidney M. Dulberg.
 Capt. Lepo Eff.
 Capt. Milton Feldman.
 Capt. Leo Fishman.
 Capt. Mont M. Gardner.
 Capt. Harold H. Goodman.
 Capt. Howard J. Hauss.
 Capt. Joseph Klein.
 Capt. Hyman Kraman.
 Capt. Leonard Krugman.
 Capt. Lester Langel.
 Capt. Bernard B. Leibowitz.
 Capt. Lawrence B. Levine.
 Capt. Michael P. Liloia.
 Capt. Alfred A. Martino.

Capt. Joseph Masserman.
Lt. R. S. Mehring.
Capt. John W. Menius, Jr.
Lt. John O'Meara.
Capt. Harry G. Pfeffer.
Capt. James T. Reilly.
Lt. Maurice Robinson.

Capt. Justin M. Seides.
Capt. William N. Tunstall, Jr.
Lt. B. M. Watson.

November 1943

Lt. A. J. Brett.
Capt. Harry H. Camp, Jr.

AVIATION DENTISTRY*

DAVID A. ABRAMS, D.D.S.

MODERN aviation, ever progressing towards the ultimate in speed and high altitude ranges, has brought to light a considerable number of heretofore unexperienced environmental stresses acting upon the human body. The physiology of the human organism is such that the body can compensate for certain changes in environment if sufficient time is given the body to become acclimatized. However, a sufficient length of time is not available; furthermore, the environmental changes experienced, such as that from sea level to 30,000 feet, is only a matter of mere minutes in the modern airplane. Aviation, therefore, can be considered the etiological factor behind a multitude of new pathological reactions and responses of the human body.

The rigid physical standards set up for entrance into the air corps show that a physically sound body is absolutely necessary for safe and efficient flying. It is self-evident that dentistry has an undeniably large part to contribute toward the building and maintenance of physical fitness under normal conditions at ground level. However, when man takes to the air, dentistry assumes a new and even greater importance. As the oral tissues are an integral part of the human body, they likewise present new reactions to environment to be solved by new or existing treatments. Some reactions of the teeth and their adnexa have been diagnosed and treated by the application of well-known principles of dental practice; other problems have required further research, and many investigations are still being carried on.

* The prize-winning thesis for August, 1944.

ORAL FOCI OF INFECTION

Aviation dentistry had its beginnings in the decade following World War I. As early as 1923, Neblett attempted to show that chronic apical abscesses and chronic periodontoclasia, either separately or combined, are not an unusual etiology of staleness in air service pilots.¹ While the symptoms of staleness are manifested at an early stage in a flyer, the true cause of the symptoms is not often suspected until later, when there may be evidence of an acute dental disturbance. In the interim, the pilot may be temporarily disqualified for flying and kept under observation and treatment for a neuro-circulatory disturbance with the following symptoms: slight headache, dizziness, gastro-intestinal disorders, loss of appetite, fatigability, and the possibility of an actual distaste for flying. Neblett remarked that until the oral focus of infection was located, the etiology of the symptoms was more often thought to be any one of the following: excessive flying, overwork in administration details, close confinement, lack of exercise, or worry of any sort.

Neblett realized that examinations attempted to attain physical and mental perfection in candidates for aviation training. He also noted,

Yet in the qualification of pilots for the air service, there is no one thing in their physical make-up which is given as little concern as the true condition of their teeth. These, for the most part, are of interest only in so far as macroscopical evidence points to their general condition of soundness and to the required number necessary for the function of mastication. These having fulfilled requirements at the time of initial examination and acceptance of the pilot, frequently become diseased later.

Neblett described nine cases of pilots whose general symptomatology indicated a neurocirculatory disorder, but who improved immediately upon the removal of an accompanying oral infection.

Da Cruz emphasized the importance of complete roentgenographic examination of the teeth of applicants for the air service and of a periodic roentgenographic examination of the teeth of pilots.² The aim was to find, diagnose, and correct dental abnormalities and to diagnose dental disease, especially focal infection. The latter should be treated immediately, as it causes diminution of auditory and visual acuity, arthritis, meningitis, and endocarditis.

DENTAL CARIES

The problem of dental caries acquires a new importance when related to aviation. In a recent survey conducted on 7,000 aviation cadets at the San Antonio Cadet Center, it was found that the average number of carious, missing, and filled teeth ranged from nine per cadet to twenty-one per cadet.³ The cadets examined make up a cross-section of the best part of our manpower of military age. The greater part of these men came from average or better than average environments, and had better than average opportunities for dental care.

Even with the increased standards of physical health, dental caries is a frequently occurring disease in the Air Corps, and affords a problem which must be kept under constant consideration. There are many environmental conditions experienced in flying which might influence the occurrence or presence of some of the factors which produce caries or control the production of dental caries.

The administration of 4.5% oxygen in nitrogen shows that arterial blood pH and pulmonary ventilation are increased.

Saliva flow decreases at first then gradually increases, and saliva pH increases at first and then shows a very marked decrease.

The lower the percentage of oxygen given to the animal, the sooner did the saliva show a decrease in pH.

The pouring out of lactic acid and phosphoric acid into the saliva could account for the decreased salivary pH during low oxygen administration despite the blowing off of carbon dioxide.

With the continued administration of low oxygen, acids are formed which increase the secretory rate as well as diminish the salivary pH.⁴

Since anoxia, or deficiency of oxygen in the body tissues, is a not too infrequent companion of high altitude flying, the physiologic reactions of the human body should be the same as those which Brassfield described.

McClanahan and Amberson found that under nervous and chemical stimulation of the salivary glands, "The reports are not always consistent, but on the whole they indicate that salivary pH varies inversely as the pH of the arterial blood supplying the gland."⁵ These changes are attributed to diminution of carbon dioxide as a result of hyperventilation.

Fillipovich, in his experiments on changes of salivation under the influence of reduced barometric pressure, stated:

In the experiments on humans, decreased barometric pressure was followed by an increase of spontaneous salivation in the barochamber and on the next day after the experiment. As for salivation in response to stimulation, it was affected by the barochamber in the same way as in the case of the dogs (decrease of salivation and decrease in the organic part of the secretion), and changes were still present on the second and third day.⁶

AERODONTALGIA

Toothache provoked by a lowered barometric pressure was experienced by 2 to 3% of the total number of flyers examined

in pressure chambers. These simulated altitude flights revealed that dental conditions which give rise to pain upon a lowering of pressure might be divided into two main classes:

1. Pain reactions of vital pulps in carious teeth.

2. Pain reactions of degenerated and gangrenous pulps. There are many prevalent theories as to the mechanism of pain in vital teeth during high-altitude flights. In discussion of this subject, one must assume that the normal tooth is unaffected by low pressures, and that investigations deal with teeth in or around which there have first existed some pathological changes.

Some investigators believed that pain was due to expansion of air bubbles found under fillings which were improperly manipulated, or in cement linings used for inlays. Expansion due to decreased pressure would cause the air entrapped in the bubbles to press against the dentinal tubules and elicit pain responses. However, the pressure differential is not great enough to cause pain; and, if the pressure were great enough, the fillings would be displaced with an immediate cessation of pressure and pain.

Mitchell suggests that there might be a shrinkage of filling materials causing a leakage which would permit the oral fluids to reach the sensitive dentin.⁷ Restarski, in his experiments, found that in the cases of improperly manipulated filling materials, dyes used in the experiments were discovered in and under fillings when the teeth were subjected to decreases in barometric pressures.⁸ In flight the fluids of the mouth might be forced into the margins and cause pain upon reaching the dentin.

Mitchell also suggests the possibility of an acute histotoxic anoxia due to the lack of collateral circulation and a venous stasis might be the cause of the symptoms.⁷

Lipson and Weiss mention the possibility of aeroembolism's being the etiological factor of aviator's toothache.⁹ They state that the nitrogen bubbles might compress the nerves of the blood vessel walls or the dental nerve itself, with resulting pain reflexes.

With reference to aeroembolism as the causative factor, Knisely supposes a prolonged spasm of the arterioles of the connective tissue and the striated muscles which completely shuts off the blood supply. This action results in a local anoxia and pain.⁷

Meier suggested the possibility that temperature changes might cause the pain.¹⁰ Harvey carried out experiments in which he embedded thermocouples in cavity preparations and subjected the patient to "runs" in a refrigerated decompression chamber.¹¹ His conclusion was that in relation to the reaction brought about by changes in temperature, iced drinks would produce a lower tooth temperature than high altitude flying.

The treatment used in cases of vital teeth is the placement of obtundent linings or base materials in all deep cavities. New fillings should be placed in all unfilled cavities and all defective restorations should be replaced.

The problem becomes more simple when one considers the pain reactions in teeth with degenerated or gangrenous pulps. Kennon suggests that gases generated as by-products of the necrotic pulp tissues within the canal expand under reduced pressure, causing pain and enlargement of the area of inflammation.¹² Mitchell's theory of an acute histotoxic anoxia and Knisely's theory of aeroembolism can also be considered in relation to this problem.

Treatment of such cases is also simple. The periapical involvements must be removed either by extraction, root canal therapy, or apicoectomies.

EFFECT OF HIGH-ALTITUDE FLYING UPON FILLING MATERIALS

The first hint of any dental deterioration due to increased stresses in high-altitude flying was reported in an anonymous record from Wright Field, Ohio.¹³ Aviators engaging in high-altitude flights had experienced the loss of fillings and inlays due, it was believed, to excessive changes in temperature brought about by the use of oxygen tubes held in the mouth during such flights. The fillings were not lost during flight, but apparently became loosened and were subsequently lost.

Investigations were made to determine whether the difference in coefficient of thermal expansion of metallic fillings and tooth structure was great enough to cause dislodgement of the fillings when subjected to sudden changes in temperature. Teeth with different types of fillings were immersed in boiling water and then transferred to an ice bath. Many tests in temperature variation were performed, and subsequent microscopic examinations showed that none of the fillings had become dislodged. Some of the amalgam restorations showed that small quantities of metallic mercury came to the surface when the teeth were in the boiling water. Conclusions reached were that sudden changes in temperature in the oral cavity could have no effect upon the loss of dental restorations. The maximal range of temperatures that can be tolerated in the oral cavity is from 0° Centigrade to 60° Centigrade; whereas the teeth experimentally withstood sudden changes of as high as 150° Centigrade without any noticeable ill effects. Irrespective of the experimental findings, the problem of the loss of fillings and dental deterioration still persisted.

Since there was a great possibility that the vital tooth would respond differently to high-altitude changes, further investigations upon the same subject were under-

taken by Armstrong and Huber.¹⁴ According to these men, the teeth were normally subjected to three distinct abnormal variations in environment during high-altitude flights. They reasoned that if the teeth or dental restorations were affected by high-altitude flying, it was obvious that the effect must be due to one or a combination of the three factors: decreased barometric pressure, increased oxygen percentage, and lowered atmospheric temperatures.

Restarski concluded that a displacement of properly inserted dental restorations exposed to extremely low barometric pressures seems probable.⁸ He believed that restorations, even though constructed with improperly manipulated filling materials or with air spaces present, would not be displaced. However, enough marginal leakage might occur to cause the displacement of amalgam, cement-silicate, and oxyphosphate of zinc cement fillings, when these restorations are exposed to rapid changes in barometric pressure.

An increase in oxygen percentage in the inhaled atmosphere could only produce a deleterious effect through an oxidation of the tooth substance or dental restorative materials. Since dental enamel and dental materials are chemically inert and not readily oxidized, especially at low temperatures, this possibility should be dismissed. However, Willhelmy said:

I would like, therefore, to report three cases wherein restorations tarnished, thus showing oxidation. In each of these cases, the only time tarnish would occur would be after the patient had been "on oxygen." In one of these, even gold foils turned dark. The reason for this may be that the chemistry of the mouth caused a more rapid action of the oxygen.¹⁶

The decrease in atmospheric temperature is due principally to the inhalation of cold oxygen mixtures. The degree of cold attained is limited by the ability of

the aviator to withstand the discomfort produced. It was determined experimentally that a stream of oxygen at 0° Fahrenheit, taken into the mouth through a tube, could be tolerated for approximately five minutes; oxygen at -20° Fahrenheit was tolerated for one minute; and oxygen at -60° Fahrenheit produced a frost bite of the oral mucosa almost instantaneously. Any effect of low temperatures on the teeth or dental restorations must be due to a contraction or expansion with different changes in temperature.

Koelsch, the authoritative German medical investigator, states:

Local cooling due to breathing cold air or oxygen may cause the loss of fillings from teeth due to the difference in expansion between the filling material and the tooth substance. This phenomenon may cause fissures in the teeth and spaces between the filling material and the approximating wall of the cavity in which bacteria may lodge and cause further trouble.¹⁶

However, McGehee, Professor of Clinical Dentistry at New York University, states:

The case of a cavity and filling one centimeter in diameter undergoing a temperature variation of 50° Centigrade will give a free expansion along each coordinate axis of four microns for the cavity, seven microns for a gold foil filling, and twelve and one half microns for an amalgam filling. If the dimensions or the temperature ranges are less, the effect will be proportionately reduced. If there is a perfect adaption of filling to the cavity wall, there are two possibilities which might occur.

1. Elasticity of tooth structure and compressibility of filling material may be such that the adaption attained might be perfect.
2. The rigidity of the tooth and the plasticity of the tooth structure may be such that there is a flow of the material in the only open direction resulting in a sphe-roiding or bulging over the cavity.¹⁷

Willhelmy believed that contraction and expansion of metal fillings due to tem-

perature variations would be no more liable to occur in high-altitude airmen than in ground personnel.¹⁵ Also, Harvey in his experiments found that greater tooth temperature changes were experienced in drinking iced drinks than in breathing cold oxygen mixtures.¹¹

In the light of the given data, stresses due to a difference in coefficient of thermal expansion of tooth structure and restorative materials are shown to be too small to cause a loosening or deterioration of dental restorations. The conclusion reached by Armstrong and Huber was that, "environmental conditions encountered at altitudes between 10,000 and 40,000 feet had no deleterious effects upon dental restorations."¹⁴

PULP PHYSIOLOGY

Considering the deleterious effects of the abnormal variations in environment on other parts of the body during flight, and realizing that the tooth is but another organ of the body and subject to the same physiological laws, one must expect similar effects upon the dental pulp. Changes in biochemistry and physiology must be expected in the pulp as in other human organs.

The dental pulp is the sensory organ of the tooth and serves as the source of the blood and nerve supply of the dentin. The pulp has a relatively rich blood supply, consisting normally of one small artery and a correspondingly small vein. The artery breaks up into numerous branches which are then distributed throughout the pulp. These branches move towards the odontoblastic layer and split into capillary plexuses which lie close to the individual odontoblasts. The veins then carry the blood from the pulp. The walls of all the vessels of the dental pulp are very thin and easily affected by blood pressure changes. There is no collateral circulation in the pulp, and any

injury to the blood vessels at the point of entrance to the tooth affects the vitality of the entire pulp. Also the pulp is very susceptible to degenerations, infiltrations, and pulp hyperemia.

In summarizing the physiology of the dental pulp, Lipson and Weiss state:

As has been demonstrated by these dental authorities, the dental pulp has no collateral circulation. If the main artery is diseased or injured, the peripheral supply of blood will suffer, the nutrition to the tooth will become impaired, and the pulp will undergo extensive pathological changes. Furthermore, the veins of the pulp, lacking valves and not being able to collapse, make regurgitation and venous stasis possible, from any minute disturbance. Again, the pulp's enclosure in a hard, unyielding wall of dentin unfits it for efficient, immediate, and permanent response to environmental changes. Further, since there is no definite pattern of lymphatic drainage, waste products and other exudates are disposed of with difficulty, and so the pulp is at a low ebb.

Physiologically, the pulp reacts to various influences in a rather special manner, although not unlike other tissue. Vasodilation and hyperemia follow a reflex vascular spasm, with transudation and edema a consequence. With the stimulus to each such spasm removed, there would ensue a regression of the edema by virtue of restoration of vascular tonus. A continuation of the process, with increasing pressure, but with slow regression, would lead to degeneration involving atrophy, fatty changes, necrosis, or calcification. Although any of these processes might be arrested by removal of the cause, irreparable damage may have been effected.⁹

The relation of these considerations on physiology of the dental pulp to high-altitude and high-speed flying becomes evident when one realizes the marked changes which occur in the body in this new environment. Because of the absence of valves in the pulp veins, regurgitation and venous stasis occur when the pilot experiences the pull of centrifugal force present as he makes a "bank" or "pulls out of a dive" at an extremely high speed. The blood mass in the body tends

to move in the direction of the centrifugal force. Since the pilot is seated, this force is directed through the body from head to seat. The movement of blood away from the brain results in a sudden anemia or "blackout." Since this "blackout" process occurs in the brain area, is it not conceivable that the tooth "blacks out" in the same process? Furthermore, recovery from "blackout" in the pulp would not be quite so effective or complete as in the brain, since there is no recoil mechanism in the dentin walls. Both positive and negative accelerations cause extreme changes in blood pressure.

Negative accelerations are produced when the body is in an inverted position and are experienced only during acrobatic maneuvers. Negative accelerations produce the phenomenon known as "red-out." There is a centrifugal force acting on the body, but the direction of the force is from foot towards head. There is a great increase in blood circulation towards the head. Since the dental pulp is enclosed in an unyielding structure of dentin and enamel, the recoil mechanism which should take care of an increase of blood pressure would not be able to act as efficiently as elsewhere in the body. The effects of abnormal stresses upon the physiology of the pulp are only in the theory stage. However, the reactions must be kept in mind.

In the extreme cold experienced in high-altitude flying, it is conceivable that prolonged vasoconstriction of the pulp vessels might lead to degenerative changes in the teeth.

AEROEMBOLISM

Aeroembolism is the disease produced by a rapid decrease of pressure below one atmosphere. This phenomenon occurs in high-altitude flights, and is marked by formation of nitrogen bubbles in the body tissues and fluids.

Experiments proved that at sea-level pressure, 100 cc. of blood dissolves about 1.5 cc. of nitrogen, .36 cc. of oxygen, and 2.7 cc. of carbon dioxide. Much greater amounts of the two latter gases are carried in loose chemical combination with the blood. Blood oxygen is consumed in metabolism; but the blood nitrogen is physiologically inert, and goes into simple solution in the body tissues in an amount dependent upon the partial pressure of nitrogen in the lungs. At sea-level pressures, the body tissues are saturated with nitrogen.

During a decrease in atmospheric pressure, the internal partial pressures of the body nitrogen are above that of the lungs and the tissues are consequently supersaturated. Thus, the nitrogen of the blood begins to be given off in the lungs, and that of the tissues begins to enter the blood stream. If the ascent is slow enough to allow the dual process of compensation to occur so that the concentration of nitrogen in the body will not exceed twice the normal concentration for that altitude, nothing unusual will occur. However, if the threshold of the concentration of nitrogen in the body is twice normal or above, the nitrogen gas will come out of solution and form bubbles, with slight amounts of oxygen, carbon dioxide, and water vapor included. These bubbles are formed not only in the blood but in other body tissues, especially in those which have a high fat content and a poor blood supply.

Symptoms of aeroembolism appear in the normal body at the altitude of 30,000 feet. In excess of 30,000 feet, only a rate of ascent of much less than 200 feet per minute is considered to be safe. The danger of aeroembolism in the cardiovascular system is the possibility of an embolism in an end-artery. In the osseous structure of the body, pain is the most frequent symptom. The dental signifi-

cance of aeroembolism is apparent when one realizes the possibility of end-artery embolism with consequent pathologic reactions, and the possibility of the released nitrogen bubbles' causing a pressure-pain syndrome.

The symptoms of abnormal pulp physiology and aeroembolism become doubly important when one realizes that it is not the patients with demonstrable causes of pathologies who present the great problems in aviation dentistry, but those aviators who experience idiopathic discomforts.

AERO-OTITIS MEDIA

Aero-otitis media is an acute or chronic, traumatic inflammation of the middle ear. It is caused by a pressure difference between the air in the tympanic cavity and that of the surrounding atmosphere as commonly occurs during changes of altitude in flight. Aero-otitis media is characterized by inflammation, discomfort, pain, vertigo, tinnitus and deafness.

Etiology of the condition is a lack of ventilation of the middle ear during atmospheric pressure changes to the extent of trauma to the tympanic cavity. The causes of a lack of ventilation of the middle ear are:

- A. Voluntary failure to open the eustachian tube.
 1. Inexperienced pilots and passengers.
 2. Persons under anesthesia.
 3. Persons in coma or sleep.
- B. Inability to open the eustachian tube.
 1. Persons suffering from:
 - a. Upper respiratory infections.
 - b. Nasal obstructions.
 - c. Sinusitis.
 - d. Tonsillitis.
 - e. Neoplasma in the nasopharynx.
 - f. Paralysis of the soft palate or the superior pharyngeal muscles.
 - g. Enlargement of tonsils.
 - h. Inflammations in the nasopharynx.
 - i. Scar tissue around the eustachian tube.
 - j. Malposition of the jaws.

It is with malposition of the jaws as an etiological factor of aero-otitis media that the following discussion deals.

The eustachian tube is a tube extending from the middle ear to the nasopharynx. It consists of a bony part and a cartilaginous portion, both of which are covered with fibrous tissue. The lumen of the tube is narrowest at the junction of its two component parts, and the tube expands rapidly in both directions. The pharyngeal orifice of the eustachian tube is located on the lateral wall of the nasopharynx. Control of the eustachian tube is affected by three muscles: the levator veli palatini, which elevates the soft palate, narrows the eustachian ostium, and dilates the isthmus; the tensor veli palatini, which tenses the soft palate and opens the eustachian tube; the salpingopharyngeus, which raises the upper and lateral parts of the pharynx, and opens the ostium of the eustachian tube.

Normally, the eustachian tube acts as a drain and ventilator for the middle ear. Ciliary motion in the tube and the valve-like action of the tube favor motion from the ear to the nasopharynx. The tube is normally closed, but opening is accomplished by constriction of its dilator muscles. With the opening of the tube, any air pressure differential which might be present is equalized.

During flight, it requires about 15 millimeters of mercury pressure, which is equivalent to an altitude of 500 feet, to force the eustachian tube open and allow relief by a rush of air from the ear to the nasopharynx. While the pressure differential is building up, the tympanic membrane bulges outward, and when sufficient excess pressure is realized, there is a sudden annoying click in the middle ear as the tympanic membrane snaps back to its normal position, and equalization of pressure occurs. Above 500 feet of altitude, this cycle of actions continues as

before, except that the pressure excess is 11.4 millimeters of mercury pressure, which is equivalent to 425 feet of altitude.

During descent or increase in nasopharynx pressure, the eustachian tubes stay closed, no matter how great a pressure differential is created.

These conditions do not presuppose any voluntary or involuntary efforts to equalize pressure by opening of the eustachian tube. Swallowing or voluntary opening of the tube affords an immediate equalization of ear pressures, except in instances of increased pressures. Normal swallowing occurs as an involuntary action on the average of every 60-75 seconds. Therefore, a rate of climb or descent of 200 feet per minute will usually cause no discomfort; 500 feet per minute will usually cause slight discomfort; and 1,000 feet per minute moderate discomfort, even though no effort is made to ventilate the eustachian tube.

Malposition of the jaws as an etiological factor in otitis media was first reported by Costen in 1934, but was not applied to aviation until 1936 by Willhelmy. The teeth, particularly the molars and bicuspids, maintain the intermaxillary distance and, with the aid of the muscles of mastication, keep the head of the condyle in its normal relation to the glenoid fossa. Shortening of the intermaxillary distance gives rise to the following symptoms: impaired hearing, stuffy sensation of low buzzing in the ear, snapping noise in chewing, dull pains, vertigo, headaches, burning sensation in the throat, tongue, or nose, dry mouth or excessive salivation.

The pain experienced results from an erosion of the bone of the glenoid cavity, leaving only a thin plate of bone between the condyle and the richly innervated dura, with a consequent irritation of the auriculo-temporal nerve by pressure of the condyles. Pains on the side of the tongue

are due to pressure on the chorda tympani in the same area.

The interference with hearing is due to a tissue compression of the eustachian tubes and a resultant inability to equalize intratympanic pressure. Monson reports that overclosure of the mandible lessens the area for the tongue, crowding the tissues.¹⁸ This phenomenon reduces the size of the air passages and causes a lack of drainage and ventilation.

When the temporomandibular joint is in correct alignment, the external pterygoid muscle is taut, and the tensor veli palatini muscle borders the eustachian tube anteriorly and on a straight line. When the mandible is in a position of overbite, the upper head of the external pterygoid muscle is relaxed and a bundle of soft tissue piles against the tube, causing a compression. Also, the tensor veli palatini muscle becomes loose and is prevented from performing its functions of tightening the soft palate and opening the eustachian tube. Thus, a derangement of intratympanic pressure occurs during overclosure.

Lowry conducted a survey on 540 aviators.¹⁹ Eighty-three, or 15.3%, were found to have losses in vertical dimension, and 33 of these men were found to have faulty ventilation. The losses of vertical dimension were due to malocclusion or occlusal abrasion, or a combination of both. The survey was carried out in three age groups. The average age of the first group was 26 years, and 10% were found to have losses in vertical dimensions; the second group averaged 29 years, with 12.6% having a loss of vertical dimension; the third group averaged 33 years, with 21.4% having a loss of vertical dimension.

Lowry constructed 31 removable appliances to open the bite and restore vertical dimension. Evaluation of the 26 reports received from these aviators noted that

34.6% of the patients had all disturbing symptoms eliminated; 53.8% had symptoms eased or partially alleviated; and 11.5% of the patients reported no improvement.

REACTIONS OF SOFT TISSUES

Some observers noted that mouth inflammations or low-grade infections of the gingiva seem to become worse after flying. Willhelmy believes that fatigue may be a factor in the production of this condition, and that oxygen balance and atmospheric pressure may also be the cause.¹⁵ Coons observed that Vincent's infection developed quickly in persons subject to gingival lesions.²⁰ He noted that the infection occurred in long-sustained flights at a comparatively low altitude as well as in short flights at high altitudes. Coons feels that there is a definite change in the resistance of the gingival tissues accompanied by bleeding and a recurrence of the active infection. The explanation of the reactions is that pockets conducive to incubation of the germs are present in the mouth, but rapid proliferation of the infection does not occur at ground levels. However, the fusiform bacillus and the Vincent's spirochete flourish in a medium devoid of oxygen, and when such an environment is supplied, the infection becomes active.

Hypertrophic inflammation of the gingiva, more severe in older airmen, was also observed. The inflammation occurred even in cases of carefully kept mouth, and was associated with slight, or sometimes severe, pain.

Schour and Sarnat state:

Variations in atmospheric pressure to which divers, caisson workers, and aviators are subjected may cause hemorrhage, especially if gingival irritation is already present.²¹

In a few instances, the use of oxygen in aviation may cause a drying of the oral

mucosa in some individuals. More often, a frost-bite of the oral mucosa is experienced because of the severe cold encountered while breathing the cooled oxygen. Microfilm heaters have been used in an attempt to heat the oxygen, but the appliances have been unsuccessful as yet.

POST-OPERATIVE PRECAUTIONS

Kobrin states that it has been observed that when Air Corps personnel fly within 48 hours after an extraction, they are subject to secondary hemorrhage.²² There is a possibility that the increased stresses which are evidenced in the cardiovascular system because of changes in acceleration and high-altitude flying are great enough to cause a disruption of the clot, with resulting secondary hemorrhage. To guard against this condition, surgery patients should be grounded until a strong blood clot has had sufficient time to be formed.

It has also been noticed that when upper bicusps or molars are removed, the patient must have a longer period of convalescence to reduce the possibility of a sinus perforation through the alveolus.

These reactions are completely mechanical. Surgery leaves the mouth susceptible to secondary hemorrhage, since no bandage is applied to facilitate clot formation, and no outer appliance is worn to aid in the reduction of the incidence of secondary hemorrhage.

As a complementary procedure to the roentgenographic examination of the teeth, it was deemed advisable to have photographs and models of the dentures of aviators prepared for the odontologic department of the air service, and to keep these on file as a means of identification. At the present time, the Dental Identification Record of every aviator is on file as a means of identification. The chart has a complete record of all the restorations, missing teeth, and replacements for miss-

ing teeth. As new restorations are inserted, a notation of the operation is made on the record.

Brown found that many aviators engaged in actual flying were wearing removable prosthetic appliances.²³ He drew attention to the hazards involved in their wearing such appliances while engaged in aviation operations. He stated that in accidents there is a great possibility that the denture will be forced into the surrounding soft tissues, with serious injuries resulting. He was also of the opinion that fixed bridgework carrying porcelain pontics presented a hazard almost as great as that of removable appliances.

Endeavors are being made to provide further investigations concerning the correction of dental defects which might or do cause trouble for an individual during flight. The problems faced in a study of aviation dentistry are being attacked not upon a broad physiological or functional basis, but rather upon an independent non-functional basis. Experiments carried on by physicians and dentists in service point toward the solution of many of the unsolved problems encountered in this field, and an increase in the number of research experiments points toward a greater progress in the science of aviation dentistry as a whole.

REFERENCES

1. NEBLETT, H. C.: Chronic Infection of the Teeth and Gums as a Cause of Staleness in Air Service Pilots. *Mil. Surgeon*, 53: 224-29, September 1923.
2. DA CRUZ, VERGUERIO: Value of Odontoroentgenographic Examination to Aviators. *Rio de Janeiro Hospital Reports*, 20: 143-45, July 1941.
3. SENN, WILLIAM: Incidence of Dental Caries among Aviation Cadets. *Mil. Surgeon*, 93: 461-64, December 1943.
4. BRASSFIELD, C. R.: Pulmonary Ventilation and pH of Saliva. *Am. J. Physiol.*, 116: 174-81, June 1936.

5. McCLANAHAN, H. H. AND AMBERSON, W. R.: Bicarbonate Elimination through the Salivary Glands under Nervous and Chemical Stimulation. *J. of Pharmacol. & Exper. Therap.*, 53: 189-97, February 1935.
6. FILIPOVICH, S. I.: Changes of Salivation under the Influence of Reduced Barometric Pressures. *Bull. biol. et med. exper. URSS*, 9: 338-40, April 1940.
7. MITCHELL, DAVID F.: Aerodontalgia. *Bull. U. S. Army M. Dept.*, 73: 62-67, February 1944.
8. RESTARSKI, JOSEPH S.: Effects of Changes in Barometric Pressure upon Dental Fillings. *U. S. Nav. Bull.*, 42: 155-57, January 1944.
9. LIPSON, H. J. AND WEISS, S. G.: The Biologic Approach to Problems in Aviation Dentistry. *J. A. D. A.*, 29: 1660-63, September 1942.
10. Dental Disturbances in Airmen. *Brit. D. J.*, 73: 122, September 1, 1942.
11. HARVEY, WARREN: Tooth Temperature with Reference to Dental Pain while Flying. *Brit. D. J.*, 75: 221-28, November 5, 1943.
12. KENNON, R. H. AND OSBORN, C. M.: A Dental Problem Concerning Flying Personnel. *J. A. D. A.*, 31: 662-67, May 1944.
13. The Loss of Dental Fillings by Aviators Engaged in High Altitude Flights. *Dental Bull. (Wash.)*, 6: 195-96, March 1935.
14. ARMSTRONG, H. G. AND HUBER, R.: Effects of High-Altitude Flying on Human Teeth and Restorations. *D. Digest*, 43: 132-34, March 1937.
15. WILLHELMY, GLENN: Aerodontia. *D. Digest*, 49: 311-12, July 1943.
16. KOELSCH, F.: Handbuch des Berufskrankheiten mit Bertrage anderer Deutschen Gewerbeärzte. Geneva: Gustav Fischer, 1935, Band I, p. 107.
17. McGEHEE, W. O.: Principles of Operative Dentistry. Philadelphia: P. Blakiston's Son and Co., 1936, p. 485.
18. MONSON, GEORGE: Impaired Function as a Result of Closed Bite. *J. N. D. A.*, 8: 833-39, October 1921.
19. LOWRY, R. A.: The Relation to Aviation of the Loss of Intermaxillary Distance. *10th Intern. Congress of Mil. Med. and Pharm.*, 2: 103-16, May 1939.
20. COONS, DWIGHT: Aeronautical Dentistry. *J. Canad. D. A.*, 9: 320-23, July 1943.
21. SCHOUR, ISAAC AND SARNAT, BERNARD: Oral Manifestations of Occupational Diseases, *J. A. M. A.*, 120: 1204, December 12, 1942.
22. KOBIRIN, N.: Dental Aviation. *J. 2nd Dist. D. Soc.*, 30: 7-11, January 1944.
23. BROWN, J. L.: Dangers of Prosthesis for Aviation Personnel. *U. S. Nav. M. Bull.* 34: 532-33, October 1936.



JOHN T. WIELAND

LIEUTENANT JOHN THOMAS WIELAND, D.C., U.S.N.R., the sixth B.C.D.S. alumnus to give his life in the service of his country, died on December 2, 1944.

Dr. Wieland was born in Baltimore on December 27, 1916. He attended Gilman Country School and Staunton Military Academy, graduating from Staunton in 1936. Jack received both his preidental and his professional training at the B.C.D.S. and graduated in 1942. His class was the last to be graduated before the accelerated program was put into effect. He was commissioned as an ensign in the Navy Reserve in 1941 and was assigned to active duty soon after his graduation.

Lieutenant Wieland had served for a year with a Seabee unit in the Southwest Pacific, the only dental officer with the outfit. The JOURNAL of November, 1944 contained an interesting letter from him. A sentence from that letter reveals the character and the worth of the man who wrote it: "I have found it a constant source of pleasure to improvise and supplement my operating facilities in order to render the personnel the finest dental care of which I am capable". The Navy report published in the newspapers said that "Johnny" had died aboard ship in the Pacific. However, according to information received from several officers who were associated with him at his base, Lieutenant Wieland was killed in a vehicle accident.

Dr. Wieland is survived by his wife, Mrs. Mary Elizabeth Smith Wieland. Several members of the faculty, representing the School and the Alumni Association, attended the services held in his memory.

THE SOPHOMORE CLASS

The present second-year class entered the B.C.D.S. in September of 1944 and began the sophomore course in June. It will be graduated in the fall of 1947. The roster lists every member of the class, giving his name, home town, pre-dental training sources (including Army and Navy assignment to colleges), tours of duty, and his contemporary status (implied if civilian or cited if Navy V-12).

- ✓ Norman D. Allen, West Wilmington, Conn.—University of Connecticut, Holy Cross—Naval Construction Training Center (Davisville, R. I.)—Navy V-12.
- ✓ William R. Allen, (A.B., M.S.), Berkeley, W. Va.—Bridgewater, Shepherd, West Virginia University, Ohio State University, Washington University—Fort Knox, Indian-town Gap, Fort Dix.
- ✓ Joseph Applebaum, Ridgely, Md.—University of Maryland, Princeton—Brooklyn Naval Hospital—Navy V-12.
- ✓ Arthur A. Aria (B.S.), Jersey City, N. J.—St. Peters.
- ✓ William R. Biddington, Piedmont, W. Va.—Potomac State, Hampden Sydney—Portsmouth Naval Hospital—Navy V-12.
- ✓ Randolph Bloxom, Mappsville, Va.—William and Mary, University of Maryland.
- ✓ Aleksey Bobenko (B.S.), Baltimore, Md.—University of Maryland.
- ✓ Ramon Cabanas, Utuado, Puerto Rico—Polytechnic Institute (P.R.).
- ✓ James C. Carroll (B.S.), Westfield, N. J.—St. Peters—Fort Dix, Camp Grant, Fort Meade.
- ✓ Ashur G. Chavoor, Worcester, Mass.—Clark, Holy Cross—U. S. Naval Hospital (Annapolis), Quantico—Navy V-12.
- ✓ Robert J. Coleman, Downey, Calif.—Fullerton Junior, University of Southern California—San Diego, Long Beach, Farragut (Idaho), Hawaii, Los Angeles, Sandpoint Naval Air Base, Anchorage (Alaska), Whitman College, Farragut—Navy V-12.
- ✓ James N. Connor, Cleveland, Ohio—Kenyon, University of North Carolina, Ball State Teachers, University of Illinois, University of Pennsylvania—Camp Perry, Army Air Base (Greensboro), Sheppard Field, Fort Meade.
- ✓ Leonard O. Copen, Boston, Mass.—University of North Carolina, Springfield Trade, C.C.N.Y., Stanford—Fort Devens, Camp Edison, Fort Monmouth, Fort Eustis, Camp Pickett.
- ✓ Fernando E. Davila-Lopez (B.S.), Rio Pedras, P. R.—University of Puerto Rico.
- ✓ Walter H. Davis, Asheville, N. C.—The Citadel—U. S. Naval Convalescent Hospital (Asheville), Key West Naval Hospital—Navy V-12.
- ✓ William P. Dodson, Norfolk, Va.—Randolph Macon, University of Richmond.
- ✓ Jerome Doherty, Harrison, N. J.—St. Peters.
- ✓ Dick Dykes, Taft, Calif.—University of Southern California.
- ✓ Paul V. Fazzalari, Oakland, Md.—University of Maryland, Northeastern University—Camp Hood, Fort Meade.
- ✓ John P. Fenton (B.S.), Jersey City, N. J.—St. Peters—U. S. Naval Hospital (Brooklyn).
- ✓ William T. Fridinger (A.B.), Cumberland, Md.—Gettysburg—Edgewood Arsenal.
- ✓ Bernard Friedman, Baltimore, Md.—Western Maryland, University of Maryland.
- ✓ Sterling R. George, South Charlestown, W. Va.—Marshall, Hampden Sydney—U. S. Naval Hospital (Camp Lejeune)—Navy V-12.
- ✓ William A. George, Matawan, N. J.—University of Maryland, University of Nebraska, Washington University—Fort Dix, Camp Crowder, Indiantown Gap, Fort Dix.
- ✓ Homer J. Gerken, Ocean City, N. J.—University of Maryland.
- ✓ David I. Gold, Baltimore, Md.—University of Maryland.
- ✓ James B. Griffin, Waterbury, Conn.—Fordham, Cornell—Sampson Naval Base Hospital—Navy V-12.
- ✓ Richard A. Grzeczowski, Camden, N. J.—Temple, C.C.N.Y., University of Illinois, Stanford, Washington and Lee—Camp Grant, Woodrow Wilson General Hospital.
- ✓ Medie B. Guerrieri, Morgantown, W. Va.—West Virginia University, University of Wisconsin—Fort Hayes, Camp Barkeley, Camp Maxey, Camp Pickett.
- ✓ Harold L. Goldberg, Baltimore, Md.—University of Maryland.
- ✓ Paul Heininger, Burlington, Vt.—University of Vermont, University of Maryland.

- Robert G. Hill, Boston, Mass.—Boston University, University of Pennsylvania—Camp Wheeler, Fort Benning, Fort Meade.
- William G. Hutchinson, (B.S.), Astoria, Ore.—University of Oregon, Oregon State, Institute of Marine Biology (Coos Bay, Oregon)—San Diego Naval Hospital, Tarawa, Kwajalein, Bougainville, Aitape, Guam, Guadalcanal—Navy V-12.
- Fernando L. Iturrino, Cayey, P. R.—Polytechnic Institute (P. R.).
- Edward R. Johnston, Providence, R. I.—Providence, Northeastern University, University of New Hampshire, Washington and Lee—Camp Hood, Fort Meade.
- Joseph P. Kenneally, Biddeford, Maine—St. Anselms.
- Neil N. Kerico, Plainfield, N. J.—University of Alabama, University of Illinois, University of West Virginia—Fort Dix, Fort Eustis, Miami Beach, Panama City, Smyrna Airfield, Newton D. Baker General Hospital.
- Steve M. Kukucka, Revloc, Pa.—St. Francis, University of Illinois, University of Pennsylvania—Miami Beach, Army Air Base (Salt Lake City), Kearns Army Air Field, Alamo-gordo Army Air Field, Clovis Army Air Field, Salani Army Air Field, Victoria Army Air Field.
- William H. Leahey, Reedsburg, Wis.—Stout Institute, Texas A. and M., Washington and Jefferson—Camp Fannin.
- John J. Lee, Pendleton, Ore.—Gonzaga—U. S. Naval Hospital (Farragut)—Navy V-12.
- Robert E. Lee, Framingham, Mass.—Boston College, Northeastern University, University of New Hampshire, University of Pennsylvania—Fort Devens, Camp Hood, Fort Meade.
- David Lewis, Baltimore, Md.—Washington and Lee.
- Paul H. Lofin, Mabscott, W. Va.—Marshall.
- Edward B. McGrath (B.S.), Windsor Locks, Conn.—Holy Cross.
- William E. Mathers, Chelan, Wash.—University of Washington—San Diego Naval Training Station, San Diego Naval Hospital, Camp Elliott, Marine Training Station (Brawley, Calif.), San Diego Marine Base, New Zealand, Guadalcanal, Bougainville, Guam—Navy V-12.
- Jose E. Medina, Santurce, P. R.—Johns Hopkins.
- Charles H. Meinhold, Brockport, N. Y.—The Citadel—Fort Dix, Aberdeen, Fort Meade.
- Luis J. Melendez (A.B.), Ponce, P. R.—Polytechnic Institute (P. R.).
- Rodney S. Miller, Astoria, Ore.—University of Oregon, Willamette—U. S. Naval Hospital (Birmingham, Wash.).
- George M. Millert (A.B.), Syracuse, N. Y.—Syracuse University—Camp Upton, Camp Barkeley, Lawson General Hospital, Fort Bragg.
- Anthony F. Monaco (B.S.), Hoboken, N. J.—St. Peters—Fort Dix, Camp Grant, Fort Meade.
- Walter R. Neish, Ithaca, N. Y.—Penn. Military College, University of Maryland.
- Simon R. Nord, Los Angeles, Calif.—University of California—Fort Benning, Camp Livingston, Camp McCain, Aberdeen.
- James C. Page, Tampa, Fla.—University of Florida, Texas A. and M., University of Illinois, University of Pennsylvania—Camp Blanding, Fort McClellan, Camp Barkeley, Fort Meade.
- Frank Pavel, Lewiston, Idaho—Gonzaga—Navy V-12.
- Eneas Quintero, Panama City, Panama—Canal Zone Junior College, University of Maryland.
- Edwin R. Rapp, Takoma Park, Md.—Columbia Junior, University of Maryland.
- Leo V. Ready, Saugus, Mass.—Boston College, Northeastern University, University of New Hampshire, University of Pennsylvania—Fort Devens, Camp Hood, Fort Meade.
- Myron S. Reichel, Annapolis, Md.—University of Maryland—Navy V-12.
- Cancio A. Santiago (A.B.), Lares, P. R.—Polytechnic Institute (P. R.).
- James H. Scribner, Framingham, Mass.—Northeastern University, University of New Hampshire, University of Pennsylvania—Fort Meade.
- Harold R. Stanley, Salem, Mass.—Northeastern University—Fort Devens, Camp Hood, Fort Meade.
- John A. Stephens, Burlington, N. C.—Wake Forest College.
- William T. Strahan, Catonsville, Md.—Dickinson, Franklin and Marshall—Navy V-12.
- Patrick J. Strollo, Newark, N. J.—Seton Hall, C.C.N.Y., University of Illinois, University of Pennsylvania—Fort Dix, Camp Grant, Headquarters Third Service Command Dental Clinic.
- John C. Thompson, Clarksburg, W. Va.—West Virginia University—Indiantown Gap, Fort Dix.
- Jose A. Villeneuve, Santurce, P. R.—University of Puerto Rico.
- Thomas R. Walter, Elkton, Md.—University of Maryland.

- ✓ Ernest B. Ward, Rowland, N. C.—University of North Carolina.
 ✓ Ben A. Williamowsky, Washington, D. C.—George Washington, University of Maryland.
 ✓ Albert S. Wojtkiewicz, Baltimore, Md.—University of Maryland.
 Sterling E. Zimmerman (A.B.), Glen Burnie, Md.—Western Maryland, C.C.N.Y., University of Pennsylvania—Camp Lee, Aberdeen, Fort Meade.
 Eugene R. Zimmermann, New York, N. Y.—Fordham, University of Wisconsin—Camp Upton, Camp Grant, Camp Pickett.

The Class of 1946 (November) has a far greater national geographical distribution than most of the classes at the B.C.D.S. during the twentieth century: 19 states, D. C., and P. R. are represented. The one foreign student hails from Panama. The Puerto Rican delegation of 7 is an unusually large class group; the District of Columbia (1) figure is average. Perhaps never in the School's long history has a class had such a number of men from the Northwest: California (3), Oregon (3), Washington (1), Idaho (1). As is natural, Maryland has the largest number (14), 6 of them being Baltimoreans. New Jersey is represented by 10; New York by 4. The New England group is typical in numbers and in distribution: Massachusetts (7), Connecticut (3), Vermont (1), Rhode Island (1), Maine (1). Dean Robinson's home state of West Virginia has 6 men; North Carolina, 3; and Virginia, 2; Ohio, Pennsylvania, Wisconsin and Florida are each represented by 1 student.

Of the 73 sophomores 44 were enlisted in the services before beginning their course of dental study; 29 entered without service records. Only 2 men of the group saw combat service: Hutchinson and Mathers, both in the Navy.

The V-12 Unit lists 14 of the class; 26 are trainees of the U. S. Veterans Administration.

The benedicts of the class total 5: N. Allen, Conner, Fridinger, Rapp, and Zimmerman. That number will probably be doubled by the time the class graduates.

Among the members of this class are 4 whose fathers graduated from the B.C.D.S. Heininger

is the son of Oscar Heininger (B.C.D.S. 1910) and the nephew of Bruno (B.C.D.S. 1915) and Edwin (B.C.D.S. 1918) Heininger. Hill is the son of Robert Hill (B.C.D.S. 1914); Neish, the son of Leroy Neish (U. of Md. 1919); and Reichel, the son of William Reichel (U. of Md. 1922).

Lewis is the nephew of Jacob W. Lewis (U. of Md. 1915).

Despite the conditions imposed by the war that resulted in the interruption of the pre-dental college careers of many of these sophomores, 14 of the Class have degrees, with one of them possessing a master's degree.

Hutchinson has had an unusual and very interesting career since his graduation from Oregon State. He taught science subjects for a year at the Clatskanie, Oregon, High School. Enlisting in the Navy, he was stationed for 14 months at the San Diego Naval Hospital. Then he was assigned to the U.S.S. Ormsby (A P A -49), on which he served for 14 months as a clinical laboratory technician. His ship participated in the campaigns of Tarawa, Kwajalein, Bougainville, Aitape and Guam. Hutchinson wears 4 battle stars. He came to the B.C.D.S. by plane from Guadalcanal and by train from San Francisco.

Mathers has 2 battle stars. After 3 months at San Diego for Navy training, he was sent to Camp Elliott for 3 months. Then for 3 months he was stationed at the Brawley, Cal., Marine Training Station. His subsequent tours of duty included New Zealand (4 months) and Guadalcanal (9 months). He landed with the leathernecks on Bougainville and Guam. Mathers is the top man in the School in combat experience.

W. George entered the B.C.D.S. in 1931 as a member of the pre-dental class. After having completed one year of the dental course, he withdrew in order to build up an economic coverage for his next three years in the School. After ten years of working George enlisted in July 1943. He was stationed at Camp Crowder for 4 months. Then he was assigned to the ASTP unit at Washington University. His 6 months at Washington gave him the chance to secure the credits he needed to reenter the B.C.D.S. under requirements that had been increased greatly since 1933, his last year here.

Capt. Ben Birshtein '41 wrote in late November from the Philippines, where he is assigned to an Engineer Battalion. "Birch" also has had battlefront experience on Guam. While in Agana on that island he came across a shattered Japanese Dental Clinic. After searching through the wreckage he found several Jap dental instruments that are now his prize war souvenirs.

Lt. Alvin Greenberg '36 has had an exceptionally varied and colorful career since his enlistment in September 1941. His first tour of duty was at the Dispensary of the Charleston, S. C., Navy Yard. In February 1942 he was transferred to inshore patrol at Charleston. There followed assignments to Camp Peary, Va., Camp Endicott, R. I., and Camp Holliday, Miss. "Al" then was assigned to amphibious forces training in the Chesapeake Bay area for the invasion of Europe. His ship was the attack transport Chase manned by the Coast Guard. Later the Chase had Portsmouth, Va., and Staten Island, N. Y., as ports. The ship left Staten Island in a blizzard, headed overseas. Half-way across the Atlantic, the ship changed its course, having been chased by submarines for 500 miles. From its base at Gourock, Scotland, the Chase began a series of dry runs in rehearsal for D-day. Trips were made through the Irish Sea to Weymouth and Plymouth and in the English Channel. After five months of rehearsing overseas the Chase took aboard 500 men from the First and Twenty-ninth Divisions at Weymouth, which the Germans had given a terrific bombing a week before.

During the crossing the men could see the bombing of the German long-range guns. Ten miles from France the L C V Ps were launched, an hour's run to the shore. The men were landed on the horrendous "Bloody-Red Beach" in

Normandy. It was in this area that the Germans were engaged in rehearsing action for the reception of the invasion they expected to come. The unit from the Chase, most of them seasick after a very rough crossing, were attacked by the Germans with a terrible barrage of 88 guns. From 7 in the morning until 1:30 in the afternoon the men fought to get across 7 yards of the bloodiest beach in Normandy.

As the dental officer on the Chase "Al" remained aboard the ship to finish preparations for the reception of the wounded. Through the day the boats came back from the beach with their horrible burdens of wounded men. The dead and the hopelessly wounded were put in the dental office. The whole ship became covered with blood, glistening in the sun. Most of the wounds were severe, caused mainly by shoe mines. One of the boats, full of casualties, was hit by several 88 shots on the way back to the Chase. On the morning after D-day the Chase landed its casualties at Weymouth.

When we talked with "Al" he was on leave after landing in Boston from Oran. He was assigned to Bainbridge, but expected to go to the Pacific soon.

Capt. Allen Reed '33 has been in the Army almost three years. Before the invasion of France he was assigned to the 100th Bombardment Group, a unit of the Eighth Air Force's Third Bombardment Division, the division cited by the President for the England-Africa shuttle bombing of the Messerschmitt factories at Regensburg.

Lt. Commander "Jerry" Cullen '41, after service in England with the Seabees, is stationed at Bainbridge, Md.

Major Frank Pittman '35 has been reported as serving in Holland.

Capt. Alfred Schilling '35 (0-332620, A.P.O. 528, % P.M., N. Y. C.) is serving in the Mediterranean Area, attached to an Air Service base.

Lt. Carl Schultheis '41, after a long tour of duty at Camp Peary, recently was sent to the Mayo Clinic for a course in maxillo-facial and plastic surgery. Carl's new assignment (July) is an excellent one, aboard a destroyer tender in the Pacific.

Capt. Joseph Pichacolas '34 has been with a B-24 group of the 15th A A F in Italy.

Lt. Albert Loewensen, Lt. Herman Rockoff, and Lt. Jerome Steiner, of the Class of August, 1944, are stationed at Camp Rucker.

Capt. Mario Ramirez '42 visited the School in July. Mario began his army career in July 1942. For a year he was stationed at a hospital in Puerto Rico. The second year he spent in Panama, serving in jungle areas and in a hospital. He has been at Camp Bowie, Texas, since September. After his furlough he expects to be sent to Hawaii.

Lt. Artaldo Quinones (August '44) is with an army unit in the Philippines.

Capt. Alberto Walsh (March '43), after service in Puerto Rico and Panama, has been sent to Hawaii.

Lt. Col. Howard Topping '13 (0-157041, A.P.O. 204, % P.M., N.Y.C.), after serving in Ireland for 9 months, has been stationed at a hospital in England for the past year.

Lt. Edward Vandegrift (November '43) has been assigned to Dental Clinic II,

Station Hospital, Fort Sill, Oklahoma. After graduation "Van" was sent to Carlisle Barracks, Pa., where he spent six weeks in the Medical Field Service School. After five months in the Medical Replacement Pool at Camp Ellis, Ill., he was transferred to Fort Sill.

Lt. "Ronnie" Lawrence '41 is at Bainbridge, Md., after a series of assignments that took him to many islands of the South Pacific.

Capt. Seymour Hyman '42, after an assignment at Camp Bowie, is in the Pacific area.

Lt. William Rubin (March '43) is at Camp Bowie, where he has been stationed for the past 8 months.

Lt. Ralph Gordon '33 has been assigned to Morrison Field, Fla. He was formerly stationed at Boston. Ralph practiced in Baltimore before entering the Army in July, 1943.

Capt. Alfonse Zerdy '37 wrote in February that he was retired from the Army because of injuries received in North Africa. "Bunky" served for over two years in the Army Air Force. He is now located at 34 Water St., New Philadelphia, Pa.

The JOURNAL office had a very interesting visit from Lt. Henry Genski '38, back home after duty in New Guinea with the Seabees. Henry is now located at the Submarine Base, New London, Conn.

Capt. Edward McDaniel, Jr. '41 was a recent visitor to the School. "Mac" received his discharge from the Army because of an injury.

Commander Charles Pridgeon '35 was assigned in November, 1943, to the Naval

Training Center at Sampson, N. Y. He enlisted in 1937 and spent a year at the Naval Academy before going to sea on the USS Charleston, a patrol boat. After 27 months aboard the Charleston he was stationed for 2 years at Quantico with the Marines. His next tour of sea duty was on the brand new USS Indiana. Aboard this battlewagon he saw action in the South Pacific that earned him the three stars on his Pacific ribbon. In addition, Commander Pridgeon wears the American Defense ribbon with one star, and the American Theatre ribbon.

Capt. Cord Meyer, Jr. '29 was reported as being at a re-distribution station at Miami Beach after a term of service in North Africa.

Capt. Wilbur Burton, Jr. '37, who was in the South Pacific with the Johns Hopkins Hospital Unit No. 1 for three years, was recently sent to Leyte.

Capt. Alan Herman '42, according to a recent P.R. release, is serving with ski troops in the Alps Mountains.

Capt. Carter Tinsley '39 has been in service for almost five years. After his graduation he interned at the Marine Hospital in Norfolk. In May 1940 he received a commission as First Lieutenant in the Dental Corps, 246 C.A., Virginia N.G. He was inducted into the national service in September. After an assignment of two and a half years at Fort Story, Va., he was promoted to a captaincy in February 1943 and sent to Camp Pendleton, Va. In April he joined a harbor defense unit at Key West, Fla. He was assigned in April 1944 to Division Artillery, 20th Armored Division, then at Camp Campbell, Ky. When we last saw him Carter expected to be transferred

to the European Theatre. Along the way Carter has picked up his private pilot's license and also a marksmanship (rifle) medal.

Lt. "Bob" Betts '41, U.S.P.H.S. is assigned to the Federal Reformatory at El Reno, Oklahoma.

Capt. Herb Levy '43 (March) wrote us recently to announce the birth of his son. Herb has been in the Middle East for several months. He is keenly interested in his assignment, which calls for his traveling between bases in Iran, Iraq and Arabia. His address is 1266 A A F-N A D-A T C, A.P.O. 824, % Postmaster, N. Y. C.

Lt. Col. "Sam" Bryant '32 has received his discharge after three years in the Pacific area with the University of Maryland Base Hospital Unit, of which he was chief of dental service. "Sam" has resumed his practice and also his part-time duties in the Diagnosis Department of the School.

Capt. Alexander Spinner (U. of Md. 1922) is now assigned to duty with the Dental Clinic at Command Headquarters. Previously he was on duty with the Third Service Command Dental Clinic, which services Prisoner of War Camps in the Maryland-Pennsylvania-Virginia area.

Capt. Milton Asbell '38 (Loire D.T.C., A.P.O. 517, % P.M., N. Y. C.) is assigned to a disciplinary training center. Like many another dental officer in overseas service, "Mickey" has been doing interesting and varying work in addition to his regular dental duties. Among his extra-professional assignments have been those of finance officer, War Bond officer, recorder for military execution, and assistant to the Chaplain.

STUDENT ACTIVITIES

(The various accounts that follow are summaries of activities covering the academic year from September 1944 to June of this year)

FRESHMAN CLASS

THE freshman class was slow in organizing and electing officers, because of the usual burdens. Late in the first semester the class elected William Allen of West Virginia, president; Ben Williamowsky of Washington, vice-president; Bill George of New York, treasurer; Jack Lee, secretary; and Joe Applebaum of Maryland, historian.

The freshman dance was held at Cadoa Hall. It was a great success in spite of the midnight curfew which put an early end to the first social event of the freshman year.

Later in the second semester, both sections of the class organized soft-ball teams, engaging in several inter-class games as well as competing with the various fraternity teams.

Several members of the freshman class entered school already married. William Fridinger has a one-year old daughter, Mary Lou. Also married are William Allen (Lucille) from West Virginia; William A. George (Tess) from New Jersey; Ed Zimmerman (Beverly) from Maryland.

Many members of the class, especially those under the G.I. Bill of Rights, have come directly from the Army with rates ranging from private to captain.

SOPHOMORE CLASS

As prospective juniors, the sophomore class vainly looks forward to the day when we shall don our white gowns. To date we have had twenty-one casualties out of a starting class of one hundred and one. Our social activities consisted of the sophomore dance, held at the Merchants' Club on December 2, 1944.

On September 18, 1944, the G.I.'s of our class were discharged in order to continue their professional studies, leaving a class of 57 veterans and 23 Navy students.

A few members of the class have joined the benedicts: Leonard Rapoport (Jean Mendelsohn), John Treanor (Catherine O'Neill), Marty Stamp (Louise Peck), and William Smith (Alice Love).

Our class has the distinction of being the first to enter the B.C.D.S. under the A.S.T.P. and V-12 program.

President: Robert W. Grier, Morgantown, W. Va.

Vice-president: Aaron Schaeffer, Baltimore.

Treasurer: Leonard Rapoport, Baltimore.

Secretary: William Coleman, Baltimore.

Historian: Burton Kaye, New Haven, Conn.

Sergeant-at-Arms: Stanley Kotula, Baltimore.

Student Representative: Gaston VandenBosche, Baltimore.

JUNIOR CLASS

First nights and passing judgments... "Pax" from the cherubic Morelli seemed to be the byword of greeting, but it was not with peace that we looked forward to satisfying our requirements.

Gay times such as those provided by "Snead" Damiani, and "Tokio" Moes in class and on the clinic floor, the Conga line of Seniors at the Emerson Hotel, the A.S.T.P. that is no more, are but a few of the features that dispelled the gaseous charges of B.C.D.S.

The following students were elected officers of the Junior Class: Maurice

Jurkiewicz, president (Bellows Falls, Vt.); Eugene Nelson, vice-president (Providence, R. I.); Norman Toussaint, secretary (Berlin, N. H.); Frederick Weinstein, treasurer (Baltimore); Henry Kania, sergeant-at-arms (New Britain, Conn.); Martin Ackerman, historian (Newark, N. J.).

SENIOR CLASS

With commencement time drawing near and our careers as dental students entering the final phases, we of the Senior Class pause to retrace our steps and appraise our activities as members of the B.C.D.S. for four years.

We entered the portals of our famous institution at a turbulent period in our nation's history. It was back in June of 1942 that Dr. Hahn greeted us with his shy smile in his odoriferous lab. The weatherman cooperated with the good doctor in welcoming us. His contribution was choleric in nature. However, the majority of us survived those trying days as Freshman. We began our Sophomore year with boundless knowledge and weighty wallets. The reason—we were in the A.S.T.P. and the Navy V-12 programs. Some of us were discharged at the end of our Junior year because our services were no longer essential to the Army. We look back over our days in uniform and label them as happy ones—especially the ones spent doing K.P. at Ft. Meade. Wearing civilian clothes again and fortified to meet all accusations of being 4-F (i.e., our discharge pins) we assumed the most cumbersome task of our careers—that of being seniors. Fortunately, the Army had given us extensive instruction in gas warfare and how to ward off attacks by that deadly agent of war. Therefore, we were well-equipped to stave off all unleashings of any such material. The end of the Senior year saw us struggling to finish our require-

ments and aspiring to receive the glad tidings on announcement day.

Most of us will be re-entering the Armed Forces after graduation. We realize that our most arduous tasks lie ahead, and moreover, that they will tax our abilities to the utmost. We feel confident that we will live up to the best traditions of the School.

ALPHA OMEGA FRATERNITY

Leonard Rapaport married Jeanne Mendelsohn of Baltimore, on August 27, 1944. Alvin Liftig married Frances Greenstein of New Britain, Connecticut. Bernard Wilkins announced his engagement to Eleanor Cheslocke. On August 5, 1945, Alvin Kronthal will marry Ruth Shindler.

The mid-term Banquet and Dance was held at the Stafford Hotel on January 27, 1945. At that affair, Louis Wiseman received the Chancellor's Cup and Martin Grossbart was awarded the Bill Rich Trophy. The Senior Farewell Banquet and Dance was given on May 26, 1945, at the Hotel Belvedere. Albert Dunn was presented the Scholarship Award for maintaining the highest scholastic average during his four years' study of dentistry.

President: Murray Casper, Boston, Mass.

Vice-President: Eugene Nelson, Providence, R. I.

Secretary: Joseph Bell, Waterbury, Conn.

Treasurer: Lee Nathans, Providence, R. I.

Historian: Burton Kaye, New Haven, Conn.

XI PSI PHI

All things taken into account, this year was rather an eventful one for Xi Psi Phi. In the very beginning (in the sweltering August heat) we moved from Bolton Street to Calvert Street. This year we

went social with a couple of rushing parties, a cocktail party, plus many regular week-end parties. After many trials, tribulations and priorities we managed to get our modern well-equipped "scab" lab set up. It is now working in an efficient manner. This year five budding romances blossomed forth into marriages: Marty Stamp in October, Bill Smith in November, Frank Gilley and Bob Merriam in December and J. P. Garvey in February. We took in three new members: Bill Talbott, Bill Smith, and Paul Heininger; and two new pledges, Warren Cook and Lynn Greene.

SIGMA EPSILON DELTA

Our social season was opened on November 26, 1944, with a formal welcome to the new freshman class in the form of a "smoker", held at the Park Plaza Hotel. The group was honored by a visit from some of the graduate members from Philadelphia, New Jersey, New York, and Baltimore. Saturday night functions at the fraternity house became habitual. The social season was topped by a Farewell Dance on May 26, 1945, held in honor of the Senior Class.

Master: Burton Robert Pollack.

Chaplain: Hertz Nachlas.

Scribe: Lloyd G. Towlen.

Treasurer: Nelson Bookstaver.

Historian: Herbert Rothechild.

PSI OMEGA

Grand Master: Charles P. White.

Junior Grand Master: Bruce N. Seidmore.

Treasurer: John J. Cicala.

Secretary: Arturo Benavent, Jr.

Editor: Ralph Menichino.

Chaplain: John W. Heck.

Historian: Henry S. Kania.

House Manager: Eugene Moes.

Chief Inquisitor: Albert O. Grant.

Chief Interrogator: Michael V. Morelli.

Inside Guardian: Frank E. Peterson.
Outside Guardian: Mario F. Pires.

The outstanding events of the year were the Thanksgiving Day Party, Christmas Party, Valentine Party and St. Patrick's Day Party.

Smokers were also given for the pledges, and these were very successful as evidenced by the fact that we took in more members in the past year than in any year previous.

STUDENT COUNCIL

The Student Council of the B.C.D.S. met with the Faculty Council on March 7, 1945. Constructive criticism was presented both by faculty and student members of the Council in regard to the janitor service of the School. The Council has tried to improve this condition and asked the students' cooperation in carrying out the few simple rules that have been posted.

It was suggested that more meetings of the Council be held. Greater working harmony could be a factor if more meetings could be arranged. Most students feel that there is too distant a margin between the students and faculty. This feeling should not exist and the Council can do much to bring about a better relationship.

GORGAS ODONTOLOGICAL SOCIETY

Anent the activities of the Gorgas Odontological Society, praise alone can be given to its officers and members for their sincere efforts. Exemplification of the standards which Gorgas symbolizes was evident at the dinner dance held at the Lord Baltimore Hotel.

Dr. Biddix was toastmaster for the evening. Eloquently and emphatically his words motivated the program for the night. Mr. Foley, the guest speaker, related various incidents concerning legitimate theatre productions. Dr. Robinson

presented the following seniors with Certificates: Boyce Brawley (President), Alvin Aisenberg (Vice-president), Robert Voorhees (Secretary), Harold Meinster (Treasurer), Albert Dunn (Historian), Nathan Baker, Joseph Beard, Arturo Benavent, Ralph Bishop, Bernard Brown, Joseph Cicala, John Cadden, Harry Dressel, Robert George, Russell Gigliotti, Frank Gilley, Henry Gillers, Martin Grossbart, Alan Jackson, Melvin Luxenberg, Leon Mazzotta, George Mazur, John McWilliams, Ralph Meninchino and Bruce Mathias.

Boyce Brawley, retiring president, presented the following Juniors with keys: Robert McLean, Walter Neumann, Herbert Rothchild, Mario Colecchi, Charles Bove, Frank Petuskis, Charles Sheetz, Francis Sugiyama, George Lamotte, Martin Ackerman, Gerald Lebau, Frank Tirocchi, Lloyd Towlen, John Heck, Frederick Weinstein, Raymond Zak, Murray Casper, Robert Pollack, Eugene Nelson, Maurice Jurkiewicz (president-elect), Joseph San Clemente and Joseph Diliberto.

INTERFRATERNITY COUNCIL

Organized February 23, 1944, the Interfraternity Council is the youngest

student organization at the University. Designed and organized for the purpose of coordinating fraternity activity, the Council controls fraternity rushing, athletic contests, and fraternity dances.

Under the sponsorship of the Council, athletic leagues in softball and other sports have been organized. Through a planned program, the control of pledging has become a success. The extensive rushing program has aided the new men in gaining an insight and appreciation for fraternity life at the School.

The Council gave its first Interfraternity Ball this year. The dance was held in the main ballroom of the Emerson Hotel.

Each fraternity has three student representatives. Through this means, each fraternity has an opportunity to present problems which are of interest to all the fraternities; and through a discussion with other Council members, helpful aids are given to solve the problem. Although in its infancy, the Council is now well organized and has earned respect by all fraternity men.

Boyce Brawley: President.

Frank Gilley: Secretary.

Joseph Cohen: Treasurer.

ALUMNI NEWS

Arthur J. Kiser (B.C.D.S. 1894), who came to this School from Ohio, is living in Colorado Springs, Colo. Dr. Kiser has written much poetry and two of his short poems, "Our Soldiers" and "On Christmas Day", have been widely published.

Sumner D. Hirschberg (August 1944) has announced the opening of an office at 1445 Hancock St., Quincy, Mass.

The clinics offered by Z. Vance Kendrick '32 before local, district and the state dental societies of his home state were highly praised in the October, 1944 number of the Bulletin of the North Carolina Dental Society. Dr. Kendrick is a member of the Dental Staff and of the Dental Advisory Council of the Charlotte Memorial Hospital. An item concerning his classmate brother, Major Vaiden Kendrick, appeared in the last issue of the JOURNAL.

Now that many of our alumni have seen—and probably disliked—"The Great Moment", they will be interested in this item from John Chapman's "Hollywood" column (N. Y. News): "On the set of 'Triumph Over Pain', at Paramount, the lights and camera are being focused on the dental chair of Dr. William T. G. Morton, who discovered anesthesia. Joel McCrea plays the Doc, but now Joel's standin, Carl Andre, is poised above the chair with a fistful of ancient hand drills. It's an interesting coincidence that Andre should happen to be there—for he is a dentist. He was graduated from the Baltimore College of Dental Surgery—which was the Alma mater of Dr. William T. G. Morton himself."

From this medley of errors let us first

note the standin: Carl Andre came to the B.C.D.S. from Fairmont, W. Va., and graduated in the Class of 1925. Next let us observe that Morton did not discover anesthesia and that he did not graduate from this School. Why is it that most writers handle dental items carelessly or aspersively, either intentionally or inadvertently? The "Doc" is in bad taste, and certainly no dentist, even in the 1840's, would be working with a fistful of hand drills.

Jose Ortiz '34 is one of a group of professional men appointed by the Government of Costa Rica to establish a dental school in that country. Before coming to the B.C.D.S., Jose had studied at the Colegio de San Luis Gonzago (Cartago, C.R.), the Institute Dentaire de Nancy (Nancy, France), the University of Richmond, and the Medical College of Virginia. After obtaining his D.D.S. degree he did postgraduate work in Radiodontia and Oral Surgery at Northwestern. Jose recently visited his alma mater, which was among several dental colleges in this country selected by the Costa Rican group for his careful inspection.

Ricardo Martinelli '42, who was Consul for Panama while a student here, is practicing in Panama City. Several of our men in the services have visited Ricardo. They report that he has a splendid office, enjoys an unusually good practice, and has an excellent association with the large St. Tomas Hospital, where he is Oral Surgeon.

PERSONALS

Dr. and Mrs. Arthur J. Lepine '43 announce the birth of a son, Arthur Kurt, on October 12, 1944.

Lt. (j.g.) and Mrs. Donald G. Fales '44 announce the birth of a daughter, Donalynne Elise, on November 13, 1944.

Dr. and Mrs. Reed T. Goe '38 announce the birth of a son, Reed Thomas IV, on April 2, 1945.

Capt. and Mrs. H. Stanley Levy '43 announce the birth of a son, Stevan Marc, on March 22, 1945.

Dr. and Mrs. Riley S. Williamson '42 announce the birth of a daughter, Joyce Doreen, on June 26, 1945.

Captain Daniel W. Bixby '42 married Elizabeth B. Weakland on June 20, 1945.

Dr. and Mrs. Stewart Everson '42 announce the birth of a daughter, Carol, on June 30, 1945.

OBITUARY

Dr. Charles A. Turner (U. of Md. 1891) of Statesville, North Carolina, died in September 1944.

Dr. George A. Lynch (B.C.D.S. 1915) of Plattsburg, New York, died in October 1944.

Dr. E. P. Bugg (U. of Md. 1922) of Jacksonville, Florida, died in December 1944.

Dr. Edgar W. Marvin (B.C.D.S. 1892) of Lynn, Massachusetts, died August 6, 1944.

Dr. Francis A. Golden (U. of Md. 1904) of Hartford, Connecticut, died June 26, 1944.

Dr. Ferdinand F. Killian (U. of Md. 1919) of Pawtucket, Rhode Island, died in January 1945.

Dr. Charles Brown (B.C.D.S. 1908) of Rhode Island, died in January 1945.

Dr. Lewis R. Brown (U. of Md. 1905), of Willcox, Arizona, died October 12, 1944.

Dr. George R. Salisbury (B.C.D.S. 1905) of Asheboro, North Carolina, died December 28, 1944.

Dr. Frank C. Exley (B.C.D.S. 1889) of Savannah, Georgia, died December 23, 1944.

Dr. J. E. Parker (B.C.D.S. 1892) of Quinlan, Texas, died January 15, 1945.

Dr. Everett H. Garey (U. of Md. 1919) of Westminster, Maryland, died February 23, 1945.

Dr. C. Wood Beachy (B.M.C. 1902) of Cumberland, Maryland, died February 21, 1945.

Dr. Thomas M. Hampton (B.C.D.S. 1890) of Helena, Montana, died May 24, 1944.

Dr. Stuart Cassard (U. of Md. 1890) of Towson, Maryland, died in 1933.

Dr. W. P. Lacy (U. of Md. 1894) of South Boston, Virginia, died August 16, 1939.

Dr. Richard W. Douglass (U. of Md. 1900) of St. Mary's, West Virginia, died October 1, 1944.

Dr. Harold B. Webster (B.C.D.S. 1900) of Norfolk, Virginia, died July 3, 1944.

Dr. W. J. Shanahan (B.C.D.S. 1923) of Brooklyn, New York, died December 21, 1943.

Dr. Max Shenkman (U. of Md. 1934) of Newark, New Jersey, died October 4, 1944.

Dr. J. V. D. Thomas (B.C.D.S. 1902) of New York, died October 6, 1944.

Dr. W. A. Pressley (U. of Md. 1890) of Columbia, South Carolina, died November 8, 1944.

Dr. Bernard H. Allen (B.M.C. 1913) of Hartford, Connecticut, died June 29, 1943.

Dr. R. E. Gibbons (B.C.D.S. 1900) of Laurel, Maryland, died August 19, 1944.

Dr. Eugene B. Howle (U. of Md. 1908) of Raleigh, North Carolina, died in June 1942.

Dr. Samuel P. Sharp (B.C.D.S. 1882) of Knoxville, Tennessee, died in 1938.

Dr. Conrad Gould (Koppel S. Gold) (B.M.C. 1906) of Baltimore, Maryland, died March 20, 1945.

Dr. Jacob A. Greenberg (U. of Md. 1913) of Baltimore, Maryland, died April 8, 1945.

Dr. David G. Everhart (U. of Md. 1910) of Frederick, Maryland, died December 3, 1944.

Dr. Modie S. Jenkins (B.C.D.S. 1909) of Roanoke, Virginia, died July 19, 1943.

Dr. H. S. Gardner (U. of Md. 1909) of Martinsburg, West Virginia, died in December 1944.

Dr. Robert T. Harrigan (B.C.D.S. 1912) of Athens, Pennsylvania, died February 11, 1945.

Dr. Vernon B. Ames (B.C.D.S. 1905) of Baltimore, Maryland, died May 11, 1945.

Dr. D. C. Clark (B.C.D.S. 1898) of Morgantown, West Virginia, died May 4, 1945.

Dr. M. A. Chu-Cheong (U. of Md. 1926) of Trinidad, B.W.I., died November 1, 1937.

Dr. Elihu P. Fitch (B.C.D.S. 1896) of New London, Connecticut, died November 28, 1944.

Dr. Vernon Hiscox (U. of Md. 1896) of Norwich, Connecticut, died May 30, 1944.

Dr. Erastus R. Rhein (B.C.D.S. 1898) died on January 16 in Harrisburg, Pa., where he had practiced for over 45 years. He is survived by his wife, Mrs. Sara Rhein; two daughters, Mrs. Austin Ehleider of San Antonio, Texas, and Mrs. William Murphy of Harrisburg; and two sons, Charles and William, who were associated in practice with their father until William entered the service. Charles is a specialist in orthodontia. Also surviving is a brother, Dr. Harry Rhein, of Harrisburg, a 1912 graduate of the B.C.D.S. The deceased was a past president of the Harrisburg Dental Society; he was prominent in Masonic and Odd Fellow activities.

Dr. Thomas L. McCarriar (B.M.C. 1908) of Baltimore died on December 8, after an illness of several months. He had practiced in Baltimore for 36 years and had served as Secretary of the State Board of Dental Examiners for 29 years. In addition to his widow, Mrs. Myrtle E. McCarriar, Dr. McCarriar is survived by a daughter, Mrs. J. Leonard Jones, and a son, Lt. (j.g.) T. L. McCarriar.

Commander Edward J. Fitzgerald (U. of Md. 1913), of Boothbay Harbor, Me., died on December 19 in the Marine Hospital, Portland. Dr. Fitzgerald practiced in Bath before enlisting in the Navy in 1916; he retired in 1938. Surviving are his wife and three brothers, John of Portland, Charles of Bath and Dr. Paul A. Fitzgerald of Wilmington, Del.

Benjamin Rush Powel (B.C.D.S. 1901) died in Towson, Md., on June 14. Dr. Powel practiced in Baltimore for thirty years, retiring fifteen years ago. He was twice married. His first wife died in 1931. In 1932 he married Miss Ethel Elmer, who survives him. Also surviving are three children of his first wife: Mrs. F. J. Fox, Mrs. A. P. Jessup, Mrs. T. C. Buck, Jr., all of Baltimore.

James Miller (U. of Md. 1883) died on April 18, at Glenwood Springs, Colorado. Dr. Miller had an unusually long and interesting career in dentistry. Born in 1857, at Hamilton, Ontario, he received his elementary and high school education in Michigan. At nineteen he began working as a telegrapher in the Hudson Bay district. Before entering dental school he had studied pharmacy. In 1895 he established a chain of five dental offices in the Colorado towns of Aspen, Rifle, Glenwood Springs, and Telluride. Dr. Miller accomplished the amazing record of sixty years of active practice.

George A. Willis '25 died on May 12,

at his home in Havre de Grace, Md., where he had practiced for twenty years. Dr. Willis was a member of the board of directors of the Harford Memorial Hospital, Medical and Chirurgical Faculty of Maryland, Maryland State Dental Association, Baltimore City Dental Society, and the Harford-Cecil Dental Society. He is survived by his wife, Mrs. Fanny Copenhagen Willis, and two daughters, Mrs. Charles D. Mosley, Jr. of Lynchburg, Va., and Miss Nancy Willis.

Dr. Walthall W. Price (B.C.D.S. 1897) died in Centerville, S. D., on August 31, 1944, where he had practiced for almost a half century. The son of a Confederate officer, Dr. Price was born in 1871 at

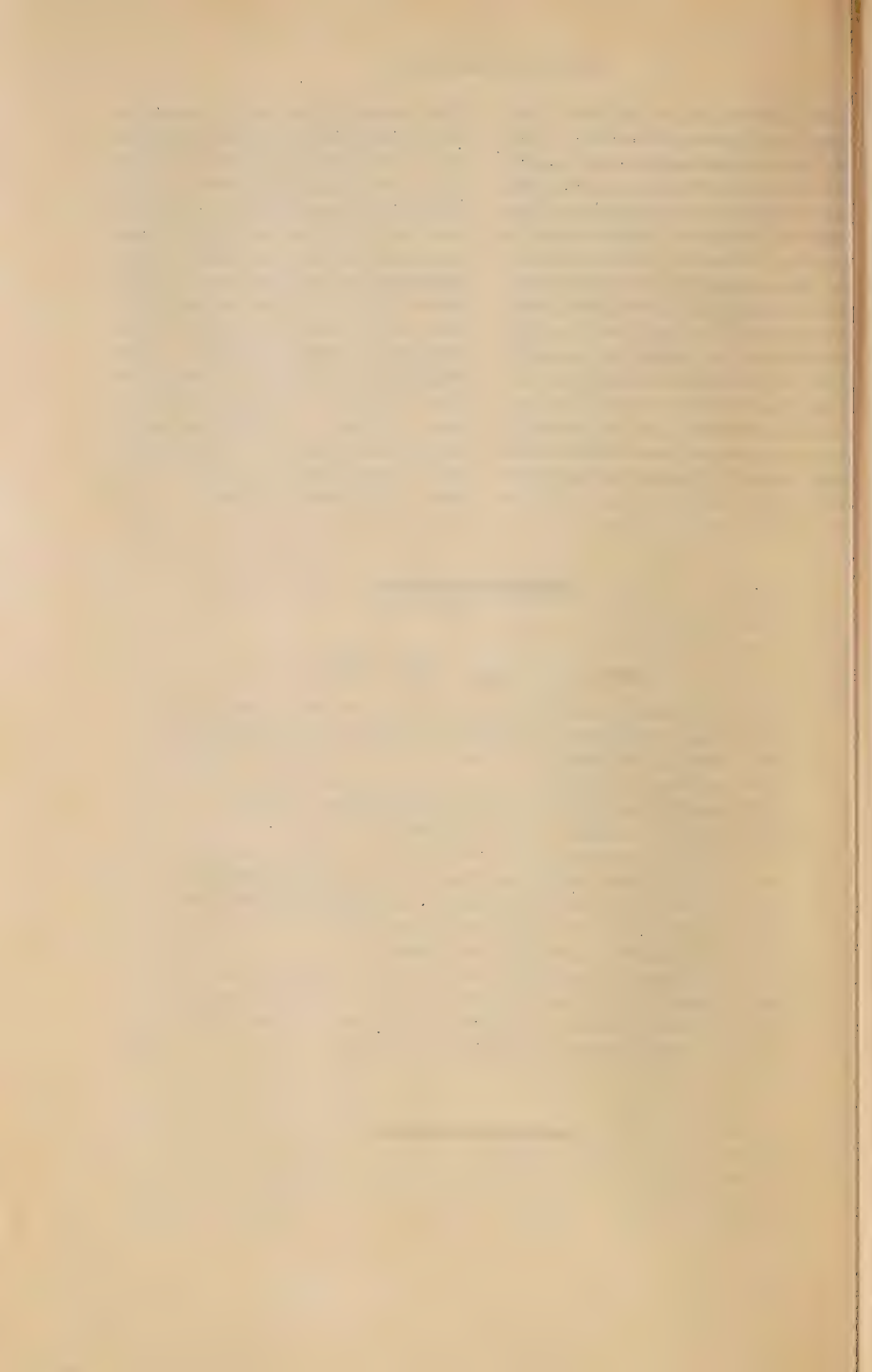
"Glen Forest", the family plantation near Dillens Mills, Va. He began the study of dentistry in 1894 at the Kansas City Dental College, but transferred to the B.C.D.S., graduating in 1897. He then went to South Dakota, beginning his professional career in association with his brother, with offices in Vermillion and Centerville. Dr. Price married Elia Newsome in 1900, at Suffolk, Va.; Mrs. Price died in 1928. He is survived by two daughters: Mrs. H. J. Peckham of Sioux Falls, S. D., and Mrs. Paul Freeburn of Chicago. Dr. Price was held in high regard by his fellow practitioners; he was President of the South Dakota State Dental Society in 1926.

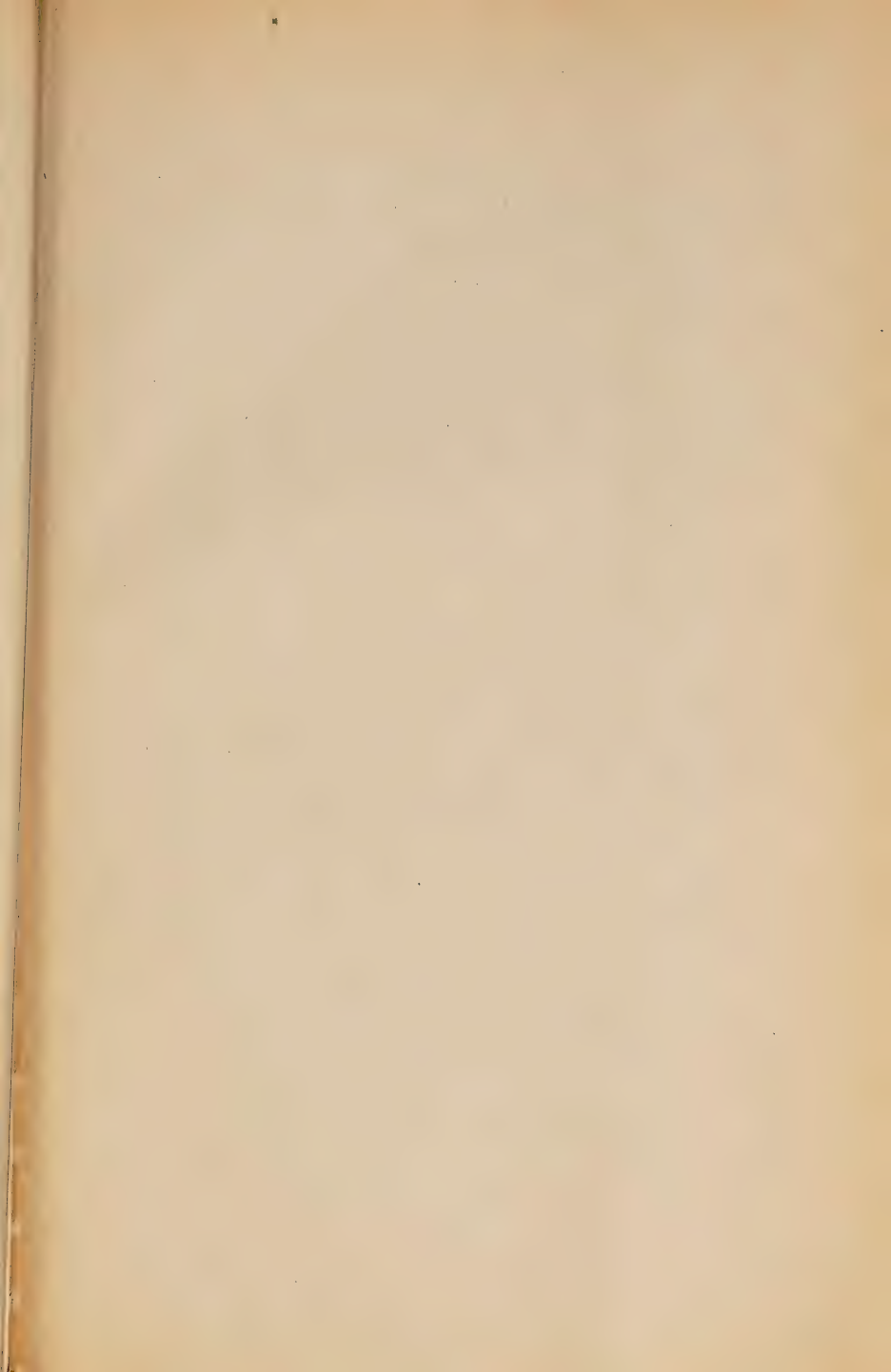
Dr. E. V. Kelly (1879-1944)

Dr. E. V. Kelly, formerly for many years a member of the faculty of the School of Dentistry, died at his home in Texas, Md., on October 27, 1944. Born in Carthage, N. C., July 2, 1879, he attended the State College at Raleigh in 1896 and 1897. He was graduated from the School of Pharmacy of the University of Maryland in 1902 and continued to be identified with the University until his death.

Dr. Kelly was secretary of the Maryland Pharmaceutical Association from 1907 to 1932 and had been secretary of the American Pharmaceutical Association since 1920. He had served on the Maryland State Board of Health since 1920. He was the dean of the School of Pharmacy from 1918 till 1926, when he became advisory dean.

Dr. Kelly was chairman of the American Council of Pharmacy. He was a member of the board of trustees of the U. S. Pharmacopoeia. Widely known in the profession of pharmacy, he also was closely associated with many leaders in dentistry and medicine.







THE *Journal*

OF THE
BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL · UNIVERSITY OF MARYLAND



LOCAL ANESTHETIC DRUGS	45
THE SOPHOMORE CLASS.	50
CLEFT PALATE, A SURGICAL AND AN ORTHODONTIC PROBLEM.	51
THE DENTAL SECTIONS OF THE UNIVERSITY HOSPITAL UNITS	66
ALUMNI HONOR ROLL: ADDITIONS	69
PROMOTIONS	70
ALUMNI NEWS.	72

VOLUME 9

November, 1946

NUMBER 2

THE *Journal*

OF THE

BALTIMORE COLLEGE OF DENTAL SURGERY
DENTAL SCHOOL • UNIVERSITY OF MARYLAND

VOL. 9

No. 2

EDITORIAL STAFF

Editor

GARDNER P. H. FOLEY

Advisory Board

GEORGE M. ANDERSON

BURT B. IDE

J. BEN ROBINSON

Student Staff

F. M. McCALL, '47, Chairman

B. B. KAYE, '47

P. HEININGER, '48

E. B. WARD, '48

B. FOX, '49

D. SMITH, '50

The Journal of the Baltimore College of Dental Surgery is published *irregularly* by the Faculty, the Students and the National Alumni Association of the Baltimore College of Dental Surgery, Dental School, University of Maryland; and the Grieves Library Foundation of the Maryland State Dental Association.

Made in United States of America

LOCAL ANESTHETIC DRUGS*

EDWARD C. DOBBS, D.D.S.

LOCAL anesthetics are drugs and agents which produce insensibility to pain in a localized area of the body, without a loss of consciousness.

From a historical point of view, few important methods for the control of localized pain were recorded prior to 1884. The compression of nerve trunks is a very old procedure for producing local anesthesia and is of unknown origin. It was revived by Ambroise Paré and was used for controlling pain associated with surgery.

Refrigerant anesthesia is produced by reducing the temperature of a part of the body by the extraction of heat to the point at which nerve impulses will not arise or will not be conducted over the nerve fibers. Larry, the chief surgeon of Napoleon's army, employed ice and salt applications for obtunding the pain of amputations (1807). B. W. Richardson introduced the ether spray technic and later used ethyl chloride, a procedure which is in use today.

The story of the local anesthetic drugs began about 1859 when Niemann and Lossen, working in Wohler's laboratory in Gottingen, isolated cocaine from the leaves of the Erythroxylon coca, a plant found principally in Peru and Bolivia. Cultivated from time immemorial, this plant has played an important part in the religious and political life of the aborigines. The plant was regarded by the Indians as a gift of divine origin which satisfied the hungry, strengthened the weak, and supplied new vitality to the exhausted; while it enabled the unhappy to forget their troubles. With the conquest of Peru by Pizarro in 1532, the

Spanish monopolized and later levied a heavy tax on the coca leaves, and thereby introduced this potent drug to the world.

In 1860, Niemann and others noted the anesthetic properties of cocaine solutions when applied to the mucous membranes. Eighteen years later, Van Anrep published a detailed report on this alkaloid. But it was not until 1884 that Karl Koller of Vienna reported his clinical research, which publicized cocaine as a local anesthetic drug.

There is an interesting story told about the events which led up to Koller's discovery. Sigmund Freud had been using the new drug, cocaine, as a remedy for the morphine habit but soon found that it was unsatisfactory for this purpose. He continued to experiment with it in other fields and confirmed Van Anrep's observations that it had local anesthetic properties. At that point he interested Koller in the drug, and they continued the experiments together. In the midst of their work, Freud left to visit the girl who later became his wife. During his absence Koller discovered that cocaine solutions would produce local anesthesia in the eyes of patients without injuring the sight. He presented a report of his investigation before the Ophthalmologic Congress at Heidelberg on September 15, 1884. Years later Sigmund Freud was to win great fame in the field of psychoanalysis.

Koller's work demonstrated that cocaine solutions, when applied to the mucous membranes, would be absorbed and produce anesthesia in a localized area. As the hypodermic syringe was in use before 1884, it was not a long step to the introduction of infiltration anesthesia. So in 1885 Hall introduced this technic into dental surgery. One year later,

* This paper was read by Dr. Dobbs before the Journal Club of the School of Medicine.

in Baltimore, William Halsted injected himself, depositing the cocaine solution into the mandibular fossa, and thereby demonstrated the technic of nerve-block anesthesia in dental practice.

The enthusiasm which followed the introduction of cocaine into surgery was short lived. Soon it became apparent that the drug was highly toxic and very prone to form addictions. To cite an example, William Halsted, then chief surgeon of the Johns Hopkins Hospital, who had demonstrated nerve-block anesthesia, continued to experiment with cocaine on himself and became addicted to it. He consulted William Osler, Professor of Medicine at the Hopkins, for treatment, and after a long and difficult struggle he managed to free himself of the vicious habit. Many others were to use this drug and learn why the natives of Peru called the coca tree the "tree of hell".

Merck, Lieberman and Giesel prepared cocaine synthetically. Thus, with a knowledge of its chemical structure, scientists sought to synthesize a new local anesthetic drug which would be as potent as cocaine but less toxic and less habit forming.

The first local anesthetic to be synthesized was eucaine in 1897. This was followed by stovaine and alypin, and in 1905 by novocaine. Of these new drugs, novocaine proved to be the most satisfactory, and today, forty years later, it is the local anesthetic of first choice in many forms of surgery. Novocaine was synthesized by Albert Einhorn and studied clinically by Heinrich Braun. The American name for this drug is procaine; however, because the German dye and chemical industry largely controlled the drug markets in this country prior to World War II, the trade name novocaine is more extensively used.

As procaine is the most important local

anesthetic, we shall discuss it in detail. It occurs as the monohydrochloride salt of a synthetically prepared alkaloid which has the chemical name of p-amino-benzoyl-diethyl-amino-ethanol.

Physically, it is a white crystalline powder, freely soluble in water (1 in 1), and soluble in alcohol (1 in 30). In solution it is acid, having a pH of about 5.5. The molecule is only partially stable and is decomposed by age and prolonged boiling. Fortunately procaine solutions may be brought to the boiling point for sterilization without appreciable molecular decomposition.

Chemically, procaine is an ester of a vitamin-like substance, para-aminobenzoic acid. To this nucleus, there is substituted an ethyl-amine group for the carboxyl hydrogen, thereby forming a primary amine. While this compound is anesthetic, it is almost insoluble in water and is too weak a base to form a soluble salt with acids. So the two hydrogens of the aliphatic amine are substituted by two ethyl groups to form a tertiary amine, which reacts to form a water soluble salt.

Pharmacodynamically, procaine hydrochloride is a local anesthetic with about one-third the potency and about one-seventh the toxicity of cocaine. It is not habit forming and its use, storage, or prescribing are not regulated by the National Narcotic Act. When injected into the body tissues it does not act as an allergen, a result which would contraindicate its subsequent use.

When procaine solutions are applied to the skin, penetration is not sufficient to produce local anesthesia. While the mucous membranes do not restrict the absorption of procaine salts as completely as the skin, they do prevent it from acting as an efficient anesthetic. The alkalizing of procaine solutions markedly in-

creases their surface anesthetizing potency.

For the obvious reasons, procaine solutions give the best results when injected beneath the dermis. Here the acid solution is neutralized by the tissue buffers which change the drug from water soluble to fat soluble. This change tends to direct the diffusion of the drug into the fat-containing nerve fibers and to concentrate it there. It is interesting to note that local anesthetics follow the same theory of action as do the general anesthetics, that is, the Myer-Overton theory. This theory states that the anesthetic potency of a drug is in direct proportion to its fat solubility and in indirect proportion to its water solubility. The alkalinizing of prepared local anesthetic solutions does not apparently increase the potency on injection, but does decrease the time required for anesthesia to occur.

The local anesthetic combines chemically with the nerve fibers, a process which results in an alteration of function characterized by an inability of the nerve to conduct impulses. The factors associated with the loss of conductivity in the nerve fibers are not well understood. There is a disappearance of the action currents in the narcotized fibers; the carbon dioxide output is decreased and the ammonia production increased. The increase of potassium ions at the surface changes the cell permeability.

The site of action of procaine, when locally injected, is on the nerve fibers, but all fibers are not equally affected. According to Adriani, the unmyelinated fibers are first affected and most completely anesthetized, with the small myelinated fibers next, and the large myelinated fibers last.

The sensory and motor fibers are not equally affected; with procaine, the sensory fibers are twice as susceptible

as the motor fibers. Apparently the efficacy on sensory fibers varies; those of pain are more quickly and more completely anesthetized than are the pressure or temperature fibers. Local pathological conditions also affect the efficacy; local inflammation such as abscesses, cellulitis, or neuritis, will decrease the anesthetic potency.

The fate of the procaine molecule in the body is hydrolysis, with subsequent elimination by the kidneys. All tissues participate in this hydrolysis, but the liver is the most efficient. This is a fortunate provision, as it tends to keep the hemoconcentration of the drug at the lowest possible level and thereby ameliorate systemic intoxication. Liver disease will contraindicate the use of the local anesthetics.

Therapeutics: Procaine and related drugs are used for the purpose of producing insensibility to pain in a localized area. As the drug has vasodilator properties, the solution to be injected must contain a vasoconstrictor to overcome this undesirable function. For this purpose epinephrine hydrochloride in 1/25,000 to a 1/100,000 solution is generally used, although neosynephrine in a 1/2500 to a 1/3500 solution and cobefrin in a 1/10,000 solution are also being used. In general surgery where comparatively large amounts of the drug are being injected (250 cc.) a 0.5 percent solution of procaine is best; in dental surgery, where only small amounts of solution are injected (2 to 4 cc.) a 2 percent solution is advocated. The tendency, today, to increase the concentration of procaine in prepared solutions must be discouraged as the effect is more irritating locally and more toxic systemically.

Toxicology: It is interesting to note that all of the local anesthetic drugs produce similar toxic symptoms, with varying degrees. The drug, to produce a systemic

reaction, must escape rapidly from the site of injection and circulate in the bloodstream. The toxic symptoms are caused by the effects of the drug on three tissues: (1) the cerebral cortex, sensory and motor areas, (2) the vital medullary centers, and (3) the cardiac muscle; generally in the order named. The toxic symptoms which are most often seen are caused by the stimulating effect of the drug on the cerebral cortex. The patient shows signs of nervousness, anxiety, and fear. The fear reaction often results in a sympathetic stimulation and an exaggeration of the original symptoms. A stimulation of the motor area produces muscular tension, trembling, tics, and, sometimes, convulsions. While these symptoms are troublesome to the patient and the dentist, they do not endanger life and their manifestations are of short duration. As with all forms of drug poisoning, prevention is better than treatment. Patients who have responded unfavorably to a previous local anesthetic should not be subjected to a subsequent injection. Premedication with barbiturates for all nervous patients is a good practice. After the toxic symptoms have developed, an injection of a quick-acting barbiturate will ameliorate the cerebral symptoms.

The second type of toxic reaction of the local anesthetic drugs is a complete depression of the central nervous system, particularly the vital medullary centers. Respiration is depressed, anoxia occurs, and death may result from respiratory failure. The heart generally continues for a short time after the respiration has failed but eventually succumbs from the lack of oxygen. These serious symptoms generally come on quickly, and occur with small as well as large doses of the drug. This observation suggests a hypersensitization to the drug. The treatment must be quick and symptomatic. For respira-

tory failure, immediate artificial respiration is indicated, to be continued until the function is normal. The administration of oxygen, 93 percent, and carbon dioxide, 7 percent, is always an aid in this circumstance. If the heart has failed, a cardiac stimulant may be of avail and should be tried. Medullary stimulants, such as metrazol, benzedrine, caffeine, etc., may be useful.

The last form of toxicity is not well described in the literature. The drug acts directly on the heart muscle, resulting in cardiac failure and circulatory collapse. The symptoms come on quickly and death ensues. Treatment seems to be of little avail. The only post-mortem changes noted are of hemorrhage into the heart muscle. Fortunately this condition is very rarely experienced in clinical practice.

A number of new local anesthetic drugs have been synthesized and studied, but only a few have been accepted clinically. Monocaine hydrochloride was introduced by Goldberger and Whitmore before the American Chemical Society in April, 1937. Chemically, monocaine resembles procaine. When injected into the blood stream it is twice as potent as procaine and about 1.6 as toxic. It is reported to be a less active vasodilator than procaine and therefore needs less epinephrine (1/100,000). It is a more potent surface anesthetic than procaine. Prepared solutions of monocaine hydrochloride were first marketed as a 1 percent solution with epinephrine 1/100,000. Later the concentration of the drug was raised to 1.5 percent. This preparation is now accepted by the Council on Dental Therapeutics.

Tetracaine Hydrochloride, U.S.P., known in the trade as pontocaine hydrochloride, is another drug which is being used in surgery. Chemically it resembles procaine. It is about ten times as potent

and many times more toxic than procaine. It is used in a 0.15 percent solution with 2 percent solution of procaine. This preparation was extensively used by the armed services until the Council on Dental Therapeutics recommended that its use be discontinued. This is the first instance in which a prepared anesthetic solution containing more than one drug has been extensively marketed. Sollmann states that the local anesthetic drugs do not potentiate each other, and the effects are strictly summation; he further states that there is little or no practical advantage in combining them. Pontocaine is one of the most toxic of the local anesthetic drugs, and the wisdom of its use for injection purposes is very questionable.

Nupercaine is a local anesthetic drug used chiefly for its surface anesthetic properties. Chemically it is not similar to procaine, being a quinoline derivative. It is about thirty-five times as toxic and many times more potent than procaine.

In dentistry it is used as a surface anesthetic in a 2 percent solution. The acid salt is freshly precipitated with alkali and applied cautiously. It is not highly efficient for this purpose. Because of its toxicity, the Council on Dental Therapeutics does not accept nupercaine for any dental purposes.

There are many other synthetic local anesthetic drugs; but as their actions are similar, we shall avoid repetition by omitting discussion of them.

Procaine hydrochloride is still our safest anesthetic. The practicing dentist should use it for general dentistry in a 2 percent solution with a vasoconstrictor. There are selected cases in which a 3 percent solution, or possibly one of the related synthetic compounds, will be indicated. When in doubt about what anesthetic, vasoconstrictor, or trade preparation to use, refer to your current issue of *Accepted Dental Remedies* for reliable information.

THE SOPHOMORE CLASS

The present second-year class, one of the smallest classes in the history of the School, entered the B.C.D.S. in September of 1945 and began the sophomore course in September, 1946. It will be graduated in the spring of 1949. The roster lists every member of the class, giving his name, home town, predental training sources (including Army and Navy assignments to colleges), and tours of duty.

- Norton J. Bloch, Union City, New Jersey—Rutgers University.
- Mitchell J. Burgin (A.B.), Dorchester, Mass.—New York University.
- James M. Callahan (B.S.) Bridgeport, Conn.—Fordham University—Army Air Corps, Fort Devens, Atlantic City Training Base, Seymour Johnson Air Field, N. C., Drew Field, Fla.—Good Conduct Medal.
- Eugene V. Chircus, Baltimore, Md.—Loyola College.
- Viron L. Diefenbach, Baltimore, Md.—Western Maryland College, Pratt Institute, Harvard University—Army, Infantry and Medical Corps, Camp Wheeler, Ga., Camp McCulloch, Ala.—Good Conduct Medal, Infantry Badge.
- Bernice Fox (A.B.) Baltimore, Md.—Goucher College.
- Sidney Herman (B.S.) Washington, D. C.—George Washington University.
- Pedro H. Hernandez, Utuado, Puerto Rico—University of Puerto Rico, Polytechnic Institute of Puerto Rico, Loyola College, University of Maryland.
- Emanuel A. Kostas, Dorothy, W. Va.—University of West Virginia—O.C.S., Camp Walters, Texas, Ft. Meade, Md.—Good Conduct Medal.
- Theodore Leizman (B.S.) Baltimore, Md.—University of Md.—Marine Corps, Quantico, Va.—Merchant Marine, Mediterranean Area (France, North Africa)—Merchant Marine Medal.
- Charles A. Lynn (B.S.) Rutland, Vermont—Duke University—Research Chemist for American Cyanamid Co.
- Charles R. Milne, Barre, Vermont—University of Vermont—Maxwell Field, Ala.; Walnut Ridge Field, Ark.; George Field, Ill.; Keesler Field, Miss.; Sioux Falls, S. Dakota; Schick Gen. Hosp., Clinton, Iowa—Good Conduct Medal.
- William F. Muhlbauer, Merrick, N. Y.—University of Rochester—Sampson Naval Training Station, Bainbridge Naval Training Center—Navy V-12.
- George E. O'Roark, Washington, D. C.—University of Md., George Washington University—Supervisor and Welding Engineer, Naval Gun Factory, Washington, D. C.
- John E. Parent, Putnam, Conn.—College of the Holy Cross—Navy, Chelsea Naval Hospital.
- Albert C. Picozzi, Providence, R. I.—Providence College, Harvard University—Camp Hood, Texas; European Theater (France, Belgium, Germany)—Purple Heart and one Oak Leaf Cluster for wounds at Metz, France, and Saarbrücken, Germany—Silver Star, Good Conduct Medal, ETO Bar with four battle stars, ATO Bar, Combat Infantry Badge, Expert Infantry Badge.
- Robert S. Simmons (B.S.), Baltimore, Maryland—Loyola College.
- George Spiegel (B.S.) Baltimore, Maryland—Loyola College.
- William H. Yeager (B.S.) Hagerstown, Maryland—University of Maryland.

CLEFT PALATE, A SURGICAL AND AN ORTHODONTIC PROBLEM*

FRANK P. GILLEY, D.D.S.

INTRODUCTION

CLEFT palate" and "harelip" are terms which the majority of people have heard of but do not know a great deal about. For centuries expectant parents have prayed and hoped that their child would be born without defects of any kind, but approximately one child out of every twelve hundred is born with some type of facial cleft. In the absence of a complete knowledge of just what factor or factors do cause cleft palate, many mothers have thought that the defect is caused by fears and impressions that they had while pregnant. This is the so-called theory of marking. Many superstitious parents have thought that the deformed child was their punishment for not having led a better life.

The object of this paper is to show that there is not reason today why cleft palate should be the handicap it has been considered in the past. It is true that some cases of cleft palate are still inadequately treated, and as a result, the patient is unable to take his or her rightful place in society. This situation is a joint consequence of the original physical deformity and the acquired harmful mental attitude.

However, with the trend toward more and better treatment through the cooperative efforts of the surgeons, the orthodontist, prosthodontist and speech teacher, there is no basis in the thought that the child with a cleft palate will be a hopeless "oral cripple" throughout life.

HISTORY

It is believed that the cleft palate,

* The prize-winning thesis for May, 1945.

like other congenital defects, has occurred in man since the beginning of time. Records from early skeletal remains are rather incomplete on this subject. About the earliest record of cleft palate in antiquity was reported by Smith and Dawson of London in their work, *Egyptian Mummies*.

Hippocrates (460-370 B.C.), the father of Medicine, made no mention of cleft palate or harelip. Celsus may or may not have touched on the subject of harelip in his book written between 14 and 37. Antyllus, a contemporary of Galen, is quoted by Oribasios (c. 325-403) as having described plastic operations upon Colobomata, or defects of the face.

Galen (131-301) mentioned cleft lip.

Paulus Aegineta (625-690), a Greek eclectic and a compiler in Alexandria, mentioned split lip: "When the ears or lips have been mutilated, we restore them by first dissecting the skin below, and afterward bringing together the lips of the wounds; then removing the callous parts and afterwards sewing and glueing them together."¹

Several of the Arabian physicians discussed fissures of the lips and advised suturing them together.

Rolando Capelluti, of Parma and the school of Salerno (Twelfth Century), was mentioned by Velpeau and Tirifahy as having observed fissures of the palate.

Ambroise Paré (1510-1590) introduced the term *bec-de-lievre*, meaning "harelip," and is credited with having closed acquired perforations of the palate with obturators.

In 1766, le Monnier, of Rouen, successfully closed a complete cleft palate. He is reported by Robert as having sutured

the two borders of the cleft and then having used the actual cautery. The child was completely cured. This was the first cure of cleft palate by operation.

In 1816, Carl Ferdinand Von Graefe, the great German surgeon and the founder of modern plastic surgery, introduced to the medical profession the first comprehensive surgical method for closing clefts of the velum.

This development was followed three years later, independently of Von Graefe, by the popularizing of sutures of the cleft velum by Philibert Joseph Roux, of Paris.

After Roux's success, the medical profession accepted staphylorrhaphy as the treatment of clefts of the velum. The operation was performed in England for the first time by Thomas Alcock in 1821.

Until 1826, palatal closures were limited to the soft palate. In that year, Johann Friedrich Dieffenbach introduced the operation for uranoplasty, or closure of the cleft hard palate, and first used lateral incisions for the relief of tensions.

The first staphylorrhaphy in America was performed by Alexander Hodgdon Stevens of New York in 1827. Jonathan Mason Warren of Boston did a successful uranoplasty in 1843.

The first complete description of the palatal muscles and their function in cleft palate was given in 1844 by Sir William Ferguson.

In 1859, Von Langenbeck resected a maxilla, leaving the periosteum intact, and after a time noted bone regeneration. This led him to suggest the stripping of the periosteum and its use in repair of the cleft of the hard palate. Before that the periosteum was not routinely used. Von Langenbeck's method is still in use and he may well be called the codifier of cleft palate surgery.²

SCIENTIFIC DISCUSSION OF CLEFTS

Cleft palate is often thought of as being

a condition that is very rarely seen. In the accompanying material on the occurrence and distribution of cleft palate, I shall attempt to show that it is a rather common congenital defect.

Cleft palate is not restricted to one race or nationality. It is found throughout the world. Some observers seem to feel that the deformity is very rare among the negroes, but others have pointed out that while it is less common among the black race, it is by no means rare.

Cleft palate is not restricted to humans alone, but has been observed among some lower animals. It has been reported in lions, horses, dogs, cats, and cattle, and has even been seen in the house mouse. Lip-jaw and palate clefts are normal among some of the Selachians, and premaxillae are totally absent in the shark.

It has been said that about one out of 2500 children is destined to be born with some sort of cleft palate or lip. Dr. John Staige Davis found in his work that about one in 1200 or 24 out of 28,085 were deformed with a palatal or lip cleft of some type.

Davis' work brought out the fact that cleft palate and harelip occurs in males over three times as often as in females, or 70.83% to 29.17%.

The literature shows that the clefts occur about twice as often on the left as on the right.

The following list of the frequency of occurrence of the different types of clefts was taken from the article by Davis and is the result of a study of 28,085 obstetrical case records in Baltimore.³

Right unilateral lip-jaw-palate splits...	29%
Left unilateral lip-jaw-palate splits.....	55%
Bilateral lip-jaw-palate splits.....	16%

W. B. Davis, in his study of 425 cleft palate cases, found the following percentages:⁴

Split velum	8%
Split palate.....	2.11%
Right unilateral—lip-jaw-palate split.....	6.11%
Left unilateral—lip-jaw-palate split.....	31.05%
Bilateral lip—jaw-palate split.....	12.94%
Unilateral split lip and bilateral cleft palate.....	1.88%
Bilateral split lip and unilateral cleft palate.....	1.41%
Bilateral cleft palate without lip split.....	20.

process and the mandibular arch and thus producing the lateral boundary.

As the fronto-nasal process grows downward, two oval depressions appear on the lower anterior surface. These are the olfactory pits and are the forerunners of the nose. They increase in size and divide the lower portion of the fronto-nasal process into three parts: the median nasal process and two lateral nasal processes.

EMBRYOLOGY AND PATHOLOGY

In order to understand completely the way in which cleft palate and harelip are formed and also to observe how the various types of clefts arise, one must be familiar with the developmental anatomy of the parts in question.

In early fetal life, the oral and nasal fossae are one chamber and exist as a depression between the head and the pericardium. This is called the stomodeum and is separated from the foregut by the buccopharyngeal membrane, which remains until the fifteenth day. Later the lateral boundaries appear and form the upper part of the mouth and the nasal cavities. The floor of the mouth and the tongue are developed from the pharyngeal portion of the foregut. The shallow and the rather widely spread stomodeum changes at this time and becomes bounded by several prominences which are above, below, and at the sides. It is from these prominences that the several parts of the face are produced. These prominences are: the fronto-nasal, which projects out over the stomodeum and is formed by the prominence of the fore-brain; the mandibular, or first visceral, arch, which is formed in the third week and develops on each side to produce the lateral and lower boundary of the stomodeum.

The mandibular arches grow forward to meet in the midline and form the lower jaw. At this same time the maxillary process grows from the base of the mandibular arch and juts out from each side, filling the gap between the fronto-nasal

During the fifth week, the nose grows forward and the olfactory pits are widely separated. The globular processes arise from the external portions of the median nasal process. From the part between the globular processes is formed the columella, which becomes the lower and anterior part of the nasal septum. The upper part becomes the dorsum of the nose. The lower portion of the globular processes becomes the middle of the lip. The lateral nasal processes form the alae nasi. There has been considerable argumentation as to whether the lateral nasal process helps form the lip and intermaxillary process. The present opinion indicates that it has nothing to do with the formation of the lip or intermaxillary process.

The maxillary processes from the mandibular arches grow inward below the eyes and unite with the globular processes of the median nasal process, thus completing the lateral process and the lateral portions of the lower lip. This takes place at about the sixth week. The maxillary processes and lateral nasal processes also complete the lower boundaries of the nasal openings. The globular processes fuse during the eighth week to complete the upper lip. At the time of development of the lip, the primitive mouth is divided into two cavities, the upper portion forming the nasal cavity and the lower, the oral cavity. This is accomplished by the globular processes which grow backward on each side and

fuse together, forming the premaxillary bones and the anterior palate. The greater portion of the palate is formed from the maxillary processes which grow horizontally inward and unite in the median line. Anteriorly they fuse with the premaxilla. Within the horizontal maxillary processes are formed the bony palatal processes of the superior maxilla and the horizontal plates of the palate bones. This union of the palate begins anteriorly at the eighth week and proceeds backward, forming the soft palate. The uvula is the last portion to unite and should be completed about the tenth week.

The lowest part of the nose is at first a single chamber but divides into two parts as the septum grows downward and backward from the inferior aspect of the frontonasal process to fuse in the median line with the margins of the palate processes.⁵

Failure of the maxillary process and the globular processes of the median nasal process to close, results in the typical harelip cleft. This may be bilateral or confined to one side and may be accompanied by cleft palate. When the palatal processes of the maxillary bones fail to fuse to one another or to the premaxillary bones, we have the bony cleft palate. Insufficiency of tissue in the soft palate may give us a cleft and too short velum.

From the description of the formation of the lips and palate, it can be seen that the clefts occur in all developing humans; but because of some factor not yet accurately determined, there is a failure of the clefts to close in about one in every 1200 and the deformity shows up at birth as the harelip and cleft palate.

By the ninth, or at most the tenth, week, the clefts are normally closed; therefore any influence which is going to act to prevent closure must do so before the end of the third month.

There has been much discussion about the premaxillary bones and their extent. In 1786 Goethe demonstrated the presence of the premaxillary bone and showed that a suture passed through the space between the cuspid and lateral teeth. This suture separated the maxillary and premaxillary bones. The controversy came about in 1879 when Albrecht advanced the theory that the premaxilla is derived from two centers of ossification on each side. He claimed that the median and lateral nasal processes each have a part in the formation of the premaxilla. These descriptions of the premaxilla would place the cleft lip in different positions.

At the present time, most of the evidence in literature seems to favor the theory of Goethe. Koelleker, in 1881, from his work on human skulls, was able to refute Albrecht's hypothesis by revealing that there is one separate center of ossification for the premaxillary bone. Victor Veau, in 1926, also favored Goethe's theory.

Clinically, it is found that in nearly all bilateral clefts, only the central incisors develop. Keith explains this fact by showing that the germ for the lateral incisors is laid down in the fissure between the premaxilla and the maxilla. When cleft palate occurs, the processes move apart and the follicle of the lateral incisor does not always develop. In some cases, it is seen loosely attached to either the maxilla or the premaxilla. According to Vaughan, a loosely attached tooth follicle is often seen at the side of a projecting premaxilla and in some cases of fully developed lateral incisors.

Authorities in cleft palate and harelip are still much in the dark as far as the true etiology goes. From the viewpoint of common interest, I shall attempt to mention all of the supposed causative factors that I have been able to find.

Heredity—Most writers seem to feel that there is definitely something in the chromosomes or genes that carries a predisposition or tendency to cleft palate or harelip. In a great number of cases, it can be shown that cleft palate has occurred before in the same family. Sometimes it is seen in the parent, and at other times it has obviously been dormant or a recessive thing for generations. Pierre Sylvian Regis, in 1860, was the first to call attention to the role that heredity plays in the formation of the clefts. This assertion was supported by Winslow, Haller, Meckel and others. Mason, in his book, gives numerous authentic cases in which heredity was definitely established as a predisposing cause. One case he relates shows that from the grandparents downward, eleven children had been born with harelips. Padgett gives the information that in about 350 clefts of which he had records, heredity could be traced in about 25% of the cases. Davis, in his work based on the records from the obstetrics clinics of Johns Hopkins and the Woman's Hospital of Maryland, found that heredity could be proved in about 20% of the cases.

One factor that might account for the seemingly small percentage is that many of the family records are complete only to about the grandparents. Also, many of the cleft palate cases may have died in early life and their histories not been recorded.

To show that all writers are not agreed that heredity plays a part in cleft palate, I would like to mention the findings of Gladstone and Wakely. These investigators checked 554 cases and reported that only two had parents with clefts. They failed, however, to mention whether the grandparents, etc., were considered; therefore, I do not believe their records can be used as conclusive proof.

Mechanical Influences—The factors

grouped under mechanical influences are many and varied. Geoffrey St. Hilaire was about the first to suggest the possibility of mechanical influences being a factor. Vrolek and Nicati maintained that cleft palate is the result of increased development of the tongue, which interposed between the palatal plates and prevented them from uniting in the mid-line. This theory does not account for harelip. Ahlfeld attempted to show that hydrocephalus was a frequent factor in cleft palate and harelip. Fein ardently supported the theory that the pressure of adenoids was a causative factor in cases of cleft palate. This could not be so, as adenoids do not appear until the third month, at a time when fusion has occurred.

Lannelongue seemed to feel that cleft palate was due to the occurrence of tumors of the tongue. Lexer supported the theory that amniotic adhesions play a part in the failure of the tissues to fuse. C. F. W. Boedecker attributed the clefts to the presence of the epithelial dental lamina which forms the enamel organ of the tooth. Warnekros demonstrated by X-ray the presence of supernumerary teeth in cases of cleft palate and labeled them as a causative factor. Other men have shown that tooth development comes too late to be of any influence.

Certain forces may be able to exert enough pressure upon the factors to cause a deformity, but what they are and how they come about are conjectural. Needless to say, most of the above theories are rather hard to accept in view of proof to the contrary, which often can be found by consulting the embryological "time schedule." If a mechanical factor is going to keep the cleft from closing, it has to act within the first ten weeks of fetal life.

Nutrition—Some authorities feel strongly that malnutrition plays a very important part in the story of cleft palate. When they begin to look for specific fac-

tors that might be missing during those critical first ten weeks, I believe they may be on the right road; but when they suggest, as many of them do, that cleft palate is seen more in the underprivileged, I take issue with them. Davis, in his survey of 28,085 obstetrical records, found as many cases of cleft palate and harelip among the privileged private patients as among the indigent. If malnutrition is a factor, why is it that the negroes, who are definitely not well nourished, have such a low incidence of clefts? Federspiel cites an interesting case:

Four years ago thirty-two jaguars were born of one mother. All of these animals had cleft palate and all died. At that time, the parents were fed with food which is improper for jaguars, namely, cold meat from which the blood had escaped. Three years ago, the diet was changed; the parent-animals were fed with warm meat still containing blood. This time twenty-five jaguars were born and none of them had a cleft.⁶

Hale, at College Station, Texas, while checking the relation of maternal Vitamin A deficiency in pigs to microphthalmia, found that in litters from Vitamin A deficient sows cleft palate and harelip were common.

Infection—Syphilis has been offered as an etiological factor, but is ruled out completely by almost all available records. Febrile diseases in the first eight weeks may be a factor.

Injury—It is conceivable that a specific injury might by chance cause a cleft palate, but there is no evidence to substantiate this theory.

"Last Child" Theory—It has been said that the last child many times may be subject to the cleft, since by that time the chromosomes of the parents are deficient. The literature seems to show, however, that primipara have as many cleft palate children as multipara.

Maternal Impressions—No compilations of the supposed etiological factors of

cleft palate and harelip would be complete without mention of maternal impressions, or marking. It seems that most of these impressions are of little actual value in determining the cause of the cleft. In order to have any effect at all, they would have to occur before the tenth week, and even then it is doubtful if they are of any consequence.

Mason cites an interesting case of a mother who lived near a cleft palate patient and shortly after marriage began to feel that her first child would have a cleft. Upon birth, the child did have a cleft. There are numerous cases remarkably like this, varying only in details. It is thought that if the shock be severe enough, there might possibly be some change in the growth of the foetus.

CLASSIFICATION OF CLEFTS

The failure on the part of the facial bones to fuse may result in the formation of very small clefts or of gigantic facial clefts. There are several classifications of the clefts. I shall list two of the better ones.

Ritchie based his classification on the alveolar ridge in the following manner:

- Group I—Prealveolar clefts
- Group II—Postalveolar clefts
- Group III—Alveolar process clefts, unilateral or bilateral.⁷

The alveolar process is viewed first when classifying the cleft. If the process is normal, the case is either Group I or Group II; but if it is cleft, it falls into Group III and is subdivided into unilateral and bilateral.

The next classification is accepted by George M. Dorrance and is taken from the German School:

Split Velum:

- (a) Limited to the uvula alone.
- (b) Involving the uvula and soft palate.

Split Palate:

- (a) Involving the velum and a portion of the hard palate.
- (b) Involving the velum and the hard palate as far forward as the anterior palatine fossa.

Lip-jaw split: Unilateral; bilateral; medial.

Lip-jaw-palate split:

- (a) Unilateral
- (b) Bilateral, with projecting premaxillae, without projecting premaxillae.

Submucous split: Involving the velum alone; involving the palate.⁸

In this classification one is able to determine the exact position of the cleft from the name.

TREATMENT

Primary treatment of cleft palate consists of surgery. Later on in this paper, I hope to develop the point that successful treatment depends not on the surgeon alone, but on the tie-up of his surgery with the work done by the orthodontist, prosthodontist, and speech teacher.

There are three outstanding reasons why the cleft palate presents a difficult problem, and it is for these same reasons that surgical and other treatment should be available in all cases. The three undesirable conditions are defective speech, inability to properly perform deglutition and, of course, the facial deformity which accompanies lip splits.

Cleft-palate speech is due to the fact that in the articulation of nearly all consonants, air that should be expelled through the mouth goes through the cleft into the nose, where it vibrates and then escapes through the nose, resulting in a characteristic nasal twang.

Another important factor in the defective speech is the irregular shape of the oral channel at the three stop positions for the tongue: the soft palate, the hard palate, and the upper front teeth. The soft palate is the most important of these and that is why the surgeon should always

strive to obtain a palate of the right length and mobility.

When the cleft palate is complicated by an alveolar ridge cleft, the loss of some teeth and the malposition of others present another problem in articulation, as the incisor teeth are very necessary in proper articulation.

Cleft palate causes disturbances of deglutition which are extremely annoying to the patient and will cause nutritional disturbances if treatment is not effected. The soft foods and liquids go upward into the nose and may pass out through the anterior nares.

The facial deformity caused by lip-jaw and lip-jaw-palate cases is typical. When left untreated, the facial deformity, coupled with the speech defect, prevents the individual from taking a normal part in business or social life and in many cases, it produces a serious inferiority complex.

Of necessity in a paper of this length, I shall touch but lightly upon the operative side of harelip and cleft palate. I shall try to point out the most common operations used and to show why they are or are not successful.

The early operations for cleft lip were not planned to correct the nasal ala or nasal floor. The vermilion border should form a continuous line at the junction with the skin. The lip should not be made too long vertically or too short in the horizontal length. When tissue is lacking, the tendency is to produce a lip too long from above downwards. The long lip is seen when too much tissue is sacrificed along the cleft borders; this error is a common fault in the repair of bilateral clefts. The nasal ala should be turned in and the nasal floor built up to match the opposite side. Angular and curved incisions are used to give greater length to the suture line.⁹

There has been considerable discussion as regards the proper time to close the

cleft lip. Most authorities now seem to feel that the cleft should be closed as soon after birth as possible, probably in the first three days. If the operation is not done at this time, the operator should wait until the baby is in good enough physical condition to stand the procedure. In the case of a double cleft, the best time is when the baby weighs about ten pounds.

Closure of the cleft lip and closure of the alveolus will be discussed together, as they are usually found associated; the closure of the alveolar process is more intimately related to lip closure than to palate closure. Whether the alveolar cleft is single or double, the protruding premaxilla should not under any circumstances be removed, but placed by hand pressure in the best position possible, with the pressure of the closed lip relied upon to keep it there. Care must be taken not to force the premaxilla too far back, or a flat upper lip and an occluded nostril on one side will result. When a double cleft results, it is far better to close only one side of the lip at a time to avoid the risk of getting the premaxilla too far back by breaking or cutting the septum. It is unnecessary and sometimes dangerous to attempt to fix the premaxillary process in position with a wire suture placed through the bone. This may cause injury to the undeveloped teeth.¹⁰

Injury to the teeth is one thing that all operators should avoid, as sound teeth must be present if later follow-up work by orthodontist or prosthodontist is to have any result.

SURGICAL TREATMENT

Space does not permit a description of the operations used in cleft lip restoration, but mention can be made of the most commonly used ones.

The most commonly used operations as listed by Padgett are: For unoperated single cleft of the lip:

1. The Mirault operation as developed by Blair.
2. The Rose-Husson operation.
3. The later operation of Veau.
4. The Thompson operation.

The Thompson and Rose-Husson operations are nearly the same. For double cleft lip three operations are widely used.

1. The operation used by Padgett.
2. The Rose operation.
3. The Thompson operation.¹¹

According to Padgett, the Mirault-Blair operation is most satisfactory in the case of the lip characterized by less lip length on the short side. The principles underlying the operations are sound, and the result is usually good.¹²

As with harelip, there is also a great deal of difference of opinion concerning the most opportune time to close clefts of the palate. There are two important factors to consider when deciding upon the correct age. First, it has been found that the younger the child is when operated on, the greater is the mortality rate. Veau's mortality rates are:

In the first year—86 cases....	9.4% mortality
In the second year—122 cases.....	5.7% mortality
In third year—72 cases.....	2.7% mortality ¹³

On the other hand, the earlier the operation is performed, the nearer the approach to normal phonation in the finished case. "Of interest in this connection are the present-day statistics of Veau and Borel, who claim 70% normal phonation in children operated on within the first year, 69% in the second year, and 26% in the third year."¹⁴

It would seem that a sort of balance would have to be obtained between the two factors.

Axhausen maintains that the best age for operation is three years, for at that time optimum function will have been obtained. Blair considers the optimum time to be from twelve months to four-

teen. Veau places the time of operation between the first and second years.

Dorrance has the following to say:

... It is our opinion, as to this point, each case of cleft palate is a law unto itself, the decision as to the proper time to operate being influenced by such factors as the general health of the child, the type and extent of the deformity, and the character of the tissue. We believe that when conditions are favorable, the safest age to operate for cleft palate is about the fifth year. In our experience, operations performed after the fifth year are free from mortality and the failures are less frequent.¹⁵

One of the outstanding plastic surgeons in Baltimore, Dr. Edward Hanrahan, says that the minimum time is eighteen months and that for better results one should wait longer.

In cleft palate, as in other surgery, the preoperative care is important. In fact, it may be a little more important in cleft palate cases.

The patient should be fed correctly for several months before operation. The early feeding has to be by artificial means; but before the operation, the child should be taught to drink and take liquids from a spoon, as a bottle cannot be used until the palate is healed. Any evidence of a nasopharyngeal infection should be eliminated. Even the slightest infection will often cause separation of the palate. Operations on cleft palate are contraindicated in the winter and very early spring.¹⁶

One of the most important considerations in cleft palate surgery is to avoid the loss of too much blood. Children do not stand bleeding well, and their mortality rate goes up in proportion to the amount of bleeding and the duration of the operation.

Ether vapor anesthesia is the anesthesia of choice, and after induction is continued by means of either a small nasal catheter or a bent metal tube held in the angle of the mouth. The mouth is preferable

because there is less chance for interference with suturing.

After the patient is under anesthesia, a mouth gag and tongue suture are placed, and the patient is put in the Rose position with the head turned back into the operator's lap. This provides a free airway for the anesthetic, and the blood is easily kept away from the larynx.

Ever since the days of Von Graefe and Roux, there have been countless operations and modifications of operations suggested for cleft palate. Some of the operations were proved of value and retained, but many of them have been discarded. I shall describe some of the most commonly used operations.

First, it might be well to define some terms to be used in connection with the operations.

Staphylorrhaphy is the term used to indicate surgical closure of a soft palate cleft.

Uranorrhaphy refers to surgical approximation of a hard palate cleft.

Uranoplasty is applied to any plastic operation for the correction of a hard palate cleft.

Uranostaphylorrhaphy indicates the operation for surgical closure of a cleft of the hard and soft palate.

One of the best known operations used in cleft palate surgery bears the name of the three great surgeons responsible for its development: Dieffenbach-Warren-von Langenbeck. The original operation, now known as the von Langenbeck operation, was performed by Le Monnier, who displaced a flap from each side of the split palate and secured the two flaps together at the median line. Dieffenbach, in 1828, used side incisions in the soft tissue, covering the hard palate so as to remove tension upon the line of suture. Warren (J. M.), in 1843, peeled off the mucous membrane from the underlying bone out to the alveolar ridge, extending this dis-

section behind the posterior edge of the hard palate. He then denuded the borders of the soft palate by excising a strip of the mucous membrane and both halves of the split uvula. He used sutures passed from before behind on one side, and behind forward on the other side and tied them at the anterior portion of the palate. Warner also advised division of the posterior pillars on both sides at their attachment to the tonsils.

In 1864, von Langenbeck performed uranoplasty in cases in which the palatal plates were vertical by uniting with sutures the mesially displaced palatal mucoperiosteum of each side of the cleft palate to the septal mucoperiosteum of the corresponding side of the vomer after the free border of the septum nasi was denuded.

The Dieffenbach-Warren-von Langenbeck operation consists, in brief, of incising the mucoperiosteum on each side of the cleft and freeing the flaps from the bone. These flaps are then united in the mid-line and sutured with freshened raw surfaces approximating. Sufficient relaxation is secured by making lateral incisions through the tissues to the hard palate. These incisions are close to and parallel to the molar teeth. In order to gain more relaxation posteriorly the mucous membrane covering the posterior surface of the soft palate is cut free from its continuation into the floor of the nose. If necessary, the hamular process is fractured so that the tensor veli palatini is relaxed. Great care is taken to avoid injury to the palatine arteries.¹⁷

Dorrance says: "Closing the split palate by mesially displacing the soft tissue covering the palatal vault is the cornerstone of cleft palate surgery since all conservative surgical methods for repairing the split palate are based on this principle."¹⁸

The Lane, or Krimmer-Lane, opera-

tion is performed by everting toward the midline soft tissue flaps from the coverings of the palatal plates. The value of this operation has been seriously questioned, and it has been found that mortality is high. While it has been determined that the defect can be closed, it is doubtful how long it will stay closed and if the patient will be able to speak. In some cases, the flap atrophies and holes result, and in other cases, the whole flap has sloughed and further operation is impossible. The soft palate is deformed and stiff in many cases, and speech is probably not restored as well as it should be.

Dorrance says:

Restoration of the palate by everting or moving on a pedicle leaf-of-book-wise, soft tissue flaps designed from the covering of the palatal plates, or the adjoining tissue, is an invaluable procedure for repairing persistent fistulae and small defects in the hard palate. However, this procedure as performed by Davies-Colley, Lane and their following, as a routine treatment for cleft palate, is unjustifiable because it supplies a tense functionless, fibromuscular septum between the mouth and nasal chambers.¹⁹

The Brophy compression operation is one of the oldest known, but is commonly attributed to Brophy. There have been three ways by which pressure is brought to bear. The first is by means of applying a truss which causes compression upon and above the maxillary and malar bones. The second method consists of some orthopedic device such as a palatal bar with a jack-screw, and the third method is accomplished by forcing the maxillae together and then securing them with a wire.

Brophy believed in operating as soon after birth as possible and based his theory upon the belief that the cleft palate is a separation of well-developed parts and not the result of failure of the

normal quantity of tissues to enter into its structure.

Dorrance believes in the use of the normal pressure of the restored lip and gentle pressure of the surgeon's hands in restoring the split in the alveolar ridge and in diminishing the width of the gap between the separated maxillae, but says:

Forced pressure applied upon the separated maxillae, a violent pressure used in forced compression by passing wires across the bones and placing lead plates as done by Brophy and his following is a very formidable procedure, accompanied with considerable deformity of the maxillary portion of the face, exfoliation of the tooth germs, and considerable distortion of the dental arch.²⁰

THE DORRANCE PUSH-BACK OPERATION

According to Dorrance, the purpose of operating for cleft palate is to restore the velum and place it in normal position, so that the resultant velopharyngeal closure will adequately shut off the nasopharynx and enable the patient to speak distinctly.²¹

Dorrance feels that most of the classical operations for cleft palate leave a short velum. In view of this, he has developed a "push-back operation" by which the soft tissues of the palate are loosened and pushed back. Operation is done in two stages. In the first stage, the palatal mucosa is elevated back to the attachment of the palatal aponeurosis. In this step the posterior palatine arteries are divided. The second operation is in about three months, or after collateral circulation has been built up. In this step, the tissues are carried back and sutured.

Length of the velum is increased in this method. The velum contacts the pharyngeal wall, and the pharyngeal sphincter is restored. Nothing is done to the raw surface left on the palate. It heals by scarring.

The treatment of the alveolar cleft

is of special dental interest, for the orthodontist and/or the prosthodontist will use this ridge and the teeth that are in it.

Split alveolar ridge usually does not require an operation. If the lip is repaired, the pressure from that, plus gentle pressure by the surgeon, will mold the ridge together. The earlier the lip is repaired, within reason, the better the resulting ridge. In bilateral lip-jaw-palate cases in which the premaxillary projection is great, it is suggested that VonBardeleben's method of sectioning subperiosteally, the septum, be used.

ORTHODONTIC TREATMENT

The orthodontist should not be called in after the clefts are closed and the patient has reached an age of about ten or twelve years, but should be consulted before or at the time of the operation. The "cleft palate team" consisting of the surgeon, orthodontist, prosthodontist, general practitioner of dentistry and speech teacher should be in contact with the case at hand from start to finish. It is only through this type of cooperative effort that the best results can be hoped for.

Fortunately, the need for cooperation is apparent to most of the cleft palate workers, and it behooves us as dentists to see that we contribute to this cooperation in every way possible.

In order that successful orthodontic treatment of cleft plate may be brought about, there must be teeth of sufficient quantity and quality. The teeth in the premaxillae of cleft palate patients are usually malposed and commonly malformed; but at least they are teeth, and if they can be retained, there is hope for orthodontic treatment. I cannot plead too strongly against the practice of removing the protruding premaxillae. In the past, more than now, that was done,

and the result was the typical flat sunken face and seemingly protruding chin. A well-trained orthodontist can produce wonders in tooth and bone movement, but is helpless unless he has adequate teeth for anchorage. It is the duty of the general practitioner to restore the teeth of a cleft palate patient to the best of his ability and the duty of the surgeon to spare these teeth if at all possible; in most cases it is possible.

The orthodontist finds two types of dental deformities in the cleft palate patient: those which are due to the cleft itself, and those which exist as a result of operations to close the cleft or clefts.

To further subdivide the cleft palate problem as it concerns the orthodontist, one must divide the clefts into complete and incomplete. In incomplete clefts that have not been operated on, the occlusion is not affected; and in the incomplete cases in which an operation has been performed, the irregularities are limited to the molar and premolar region. In complete clefts, the incisor teeth are almost always irregular and malposed. This condition is true in the cases which have not been operated on and to a greater extent in those cases that have been operated on. In addition, in the cases that have been operated on, there are found varying degrees of deformity in the bicuspid and molar area.

Again, the type of deformity differs with the operation used. When the Langenbeck operation is used, there results a bilateral contraction of the dental arch, and the Lane flap operation causes a unilateral contraction on the side from which the flap is taken.

Both types of deformity call for expansion and rotation by the orthodontist.

Orthodontic treatment does not start immediately after the operation, but the orthodontist should be in contact with the patient so that he can start treatment

at the opportune time for both procedures.

Orthodontic treatment in cases of cleft palate is tedious and drawn out over a long period of time, but it is important in order to bring about the following results:

1. An improved appearance—orthodontic treatment can restore many of the incisor irregularities and do much to take away the "flat appearance," due to the lack of bone in the premaxillae. It also can do much to remake the scarred lip so that it is more supple and mobile.

2. An improved occlusion—the occlusion in most cleft palate cases is a difficult problem, but with patience, orthodontic treatment can accomplish much towards giving the patient a better occlusion.

3. An improved foundation which is of great help to later successful prosthetic treatment.

In cleft palate work the orthodontist usually has to be satisfied with an improved instead of a perfect case. That is one point that shows the necessity for cooperation. The surgeon performs the operation and the orthodontist does the best he can with the teeth and arches in question. When he has treated the case to a point when he cannot do any more for the patient, the prosthodontist takes over.

We have taken up the advantages of or indications for orthodontic treatment, and it might be well to discuss some of the contraindications. When the palate is incompletely joined and the tissue is thin and unhealthy, orthodontic treatment should not be attempted. However, in almost all cases, orthodontic treatment will not harm the palate if caution is used and undue pressure avoided. Rest periods during orthodontic treatment of cleft palate should be adequate. In some cases, it is thought that because of the scar tissue and other

abnormal conditions, orthodontic treatment is contraindicated. It has been found that usually when an efficient force can be brought to bear, the teeth and tissues can be moved.

Orthodontic treatment of cleft palate is not too appealing to many orthodontists for several reasons. It is more difficult than average orthodontic cases. It does not necessarily require more skill, but it does require a great deal of patient, exacting work. The results obtainable are not to the liking of some men. Instead of being able to aim for a perfect result, one has to be satisfied with aiming for an improved result. In many cases, orthodontic treatment, as has been mentioned, is a preliminary step to prosthetic treatment. Another consideration is that few cleft palate patients are able to pay as much for this difficult treatment as it is worth. The orthodontist has to take the personal satisfaction he derives from the cases as part of the fee. That is fine, but it limits the number of cases of this sort that any one man can handle.

Orthodontic treatment is definitely a necessary part of the follow-up treatment of cleft palate and hare lip, and it is hoped that during the postwar years greater development will be made in this field of dental science.

CONCLUSION

This paper is the culmination of an interest in cleft palate that the writer has had over a period of a couple of years. Probably the immediate cause prompting me to use this subject for my thesis was the definite shock I received on seeing one particular case of cleft palate upon which several operations had been performed with little success. This patient was brought into the orthodontic clinic of the Baltimore College of Dental Surgery with the hope that something could be

done to improve his condition. Upon examination, it was seen that the premaxilla had been removed, and that the maxillary incisors were lost. Most of the remaining teeth were badly decayed and malposed.

Because of the lack of consultation between the orthodontist and the surgeon, these teeth in the premaxilla were lost, and the patient became an "oral cripple" for life. If, by any means at all, these teeth could have been retained, the arch might have been expanded and a far better result obtained. In this particular individual, a very bad mental attitude was already apparent. As time goes on, this condition will not improve but will become aggravated. There is not much hope for a person of this sort to get his share of happiness out of life. This particular case presents a dark picture, but it is only one of many in which removal of the premaxilla or use of wires through the bones has caused loss of teeth, valuable not only as teeth but also as places of anchorage for orthodontic appliances.

In this discussion, I do not mean to condemn the excellent work done for cleft palate cases every year, but only to point out some of the causes of failure. By writing this paper, I hope to accomplish three objectives. First, from the attempted scientific discussion, it is hoped that at least a few readers will get a wider view of the cleft palate problem than they had before. Second, it is hoped that this paper will show how important it is to save as many teeth as possible in the cleft palate patient, as it is only through the medium of teeth that later expansion of the arch and movement of rotated and malposed teeth can be obtained. Third, I hope to bring out the need for the combined efforts of those specialists necessary in rehabilitating the patient. Of necessity, the general practitioner of medicine, the obstetrician,

the pediatrician, the plastic surgeon, the orthodontist, the general practitioner of dentistry, the prosthodontist and the elocutionist must work together. Consultation and close cooperation are needed and not the old procedure of one man's receiving the case after another has finished with it.

On the basis of conversations with one of the outstanding plastic surgeons and with several of the leading orthodontists interested in cleft palate work in Baltimore, I am of the opinion that cooperation is complete in most cases operated upon in this city. Both the surgeon and the orthodontists were extremely anxious that this cooperation be extended, and all felt that it is only through combined efforts that the cleft palate problem can be handled effectively.

At the present time, this procedure is carried out to an extent; but because of unavoidable barriers, such as the inability of some patients to pay for this specialized treatment and the scarcity of qualified men to give this treatment, a large number of patients do not receive the benefit of the combined efforts of the several consultants.

It is necessary that clinics of the proper type be set up so that the treatment can be carried through smoothly and without undue interruption. As much provision should be made for these "oral cripples" as for the other types of crippled children who are cared for in great clinics throughout the country.

At the present time, these broad plans seem impossible. Now, so early in the postwar period, it is hard to predict just how far toward this projected plan we may be able to go.

However, with the resources that we have at present, it is up to us to give the best service possible. This can best be done by the following type of cooperative effort. As soon as the defect is observed

the obstetrician and the pediatrician should consult with the plastic surgeon, who will keep the patient under observation until such time as he deems right for the operation. The surgeon, in turn, should consult thoroughly with the orthodontist in order that they may understand each other's problems and accordingly do the work with the thought of the follow-up treatment in mind. The general practitioner plays an important part in that it is up to him to preserve, if at all possible, the few teeth the patient may have. Teeth in cleft palate cases tend to be poorly formed, hypoplastic and susceptible to decay. They should be watched carefully and restored with fillings or crowns when necessary.

Orthodontic care, many times, stops short of a perfect result, and it is in this connection that the prosthodontist should be consulted so that the very best preparation can be made for any appliance that he may be called upon to construct. Also in a large number of cases, the orthodontist and the prosthodontist will be called upon to decide if orthodontic treatment will be beneficial or if prosthetic restoration should be done immediately.

Also of very great importance is the elocutionist. After a cleft palate has been repaired, it is still not like the palate made by the Creator, and a great deal of patience is required in some cases so that a satisfactory speech result may be obtained. The speech teacher should be given an opportunity to work with the child as soon as possible and should also know the complete history of the case.

A. T. Pitts, in an excellent paper written in 1922, seems to sum up the thought that I wish to emphasize:

In conclusion, I would reiterate the statement I made earlier, that the successful treatment of cleft palate urgently calls for close

cooperation between surgeon, dentist and elocutionist. We cannot expect the best results to be obtained unless this liaison exists.²²

REFERENCES

1. DORRANCE, G. M.: The Operative Story of Cleft Palate. Philadelphia: W. B. Saunders Co., 1933, p. 2.
2. *Ibid.*, pp. 1-9.
3. DAVIS, J. S.: The Incidence of Congenital Clefts of the Lips and Palate. *Annals of Surgery*, 80: 363-74, 1924.
4. DAVIS, W. B.: Harelip and Cleft Palate. *Annals of Surgery*, 87: 536-54, 1928.
5. VAUGHAN, H. S.: *Congenital Cleft Lip, Cleft Palate and Associated Nasal Deformities*. Philadelphia: Lea and Febiger, 1940, pp. 16-19.
6. FEDERSPIEL, M. N.: *Harelip and Cleft Palate*. St. Louis: C. V. Mosby Co., 1927, p. 384.
7. PADGETT, E. C.: *Surgical Diseases of the Mouth and Jaws*. Philadelphia: W. B. Saunders Co., 1938, p. 384.
8. DORRANCE, *op. cit.*, 64.
9. VAUGHAN, *op. cit.*, 64.
10. BLAIR, V. P. AND IVY, R. H.: *Essentials of Oral Surgery*. St. Louis: C. V. Mosby Co., 1944, p. 419.
11. PADGETT, *op. cit.*, 415.
12. *Ibid.*, 412.
13. *Ibid.*, 434.
14. *Ibid.*
15. DORRANCE, *op. cit.*, 397.
16. PADGETT, *op. cit.*, 434-35.
17. *Ibid.*, 456-59.
18. DORRANCE, *op. cit.*, p. 404.
19. *Ibid.*
20. *Ibid.*, 405.
21. *Ibid.*, 419.
22. PITTS, A. T.: The Orthodontic Treatment of Cleft Palate Subsequent to Operation. *Den. Surgeon*, 20: 824, December 23, 1923.

THE DENTAL SECTIONS OF THE UNIVERSITY HOSPITAL UNITS

GARDNER P. H. FOLEY

ON JUNE 5 the Faculty honored the original dental officers of the 42nd and 142nd General Hospital Units, all of whom left their posts at the School to serve their country through long and arduous periods of enlistment. The occasion was a dinner

and reception in the School Library. The program included greetings by Dean Robinson, the presentation of a plaque by President Byrd, and the acceptance of the plaque by Col. Brice Dorsey and Lt. Col. Samuel Bryant. The legend of the plaque is given below.

UNIVERSITY OF MARYLAND

42nd General Hospital

Dental Service Units
Activated 20 April 1942

142nd General Hospital

42nd

Brice M. Dorsey, Col., DC, A.U.S.
Carl E. Bailey, Maj., DC, A.U.S.
Byron W. Inman, Capt., DC, Res.

142nd

Samuel H. Bryant, Lt.Col., DC, A.U.S.
Douglas A. Browning, Maj., DC, A.U.S.
John W. Cronin, Capt., DC, A.U.S.

In May of 1940, the War Department, through the Office of the Surgeon General, invited the University of Maryland to form a provisional group that would function as the nucleus of an army hospital in the event of war. The members of the unit were to be commissioned in the Reserve Corps and would enter active duty at the time of mobilization. At a meeting of faculty and alumni held on May 22 the invitation was accepted. The committee appointed for the selection of personnel included Dr. Robinson and Dr. Dorsey of the Dental School.

With the functioning of the Selective Service Act in October, 1940, the Surgeon General authorized the organization of an affiliated hospital unit to care for 1,000 patients, to be known as the 42nd General Hospital, the same numerical designation of the Base Hospital that represented the University in the first World War. After several months during which applications were considered and selections were made, letters of appointment were received by the men of the

Unit. By January, 1941, a balanced nucleus of well-trained personnel had been commissioned in the surgical, medical and dental services. The recruiting of nurses began in December, 1941. Administrative officers were commissioned. Technicians were recruited and placed in the Enlisted Reserve as part of a technical cadre.

A change in the Table of Organization of a thousand-bed general hospital resulted in a reduction in the number of officers. However, in order to maintain the identity of the group as much as possible, an alternative action was suggested. This plan was accepted by the Army. The division that followed created the 42nd and 142nd General Hospitals. On April 15, 1942, the members of the two organizations were honored by a farewell dinner held at the Belvedere Hotel.

The Dental Services of the Maryland units had their beginnings in October 1940. The original officers, selected from the faculty, were chosen to fill the re-

quired specialties as designated in the first Table of Organization. On April 20, the units left Baltimore: the 42nd for Fort Custer, Michigan; the 142nd for Fort Riley, Kansas. At these Camps the men were activated and equipped in preparation for overseas service.

After ten days at Custer the 42nd Hospital group entrained for San Francisco. On May 12 it boarded ship for Australia. The first month overseas was spent at Camp Pell, Melbourne. In July the Hospital was assigned to Camp Redbank, near Queensland. A fortnight later the 42nd was transferred to Stuartholme, overlooking the city of Brisbane. Stuartholme was transformed from a convent school into a highly efficient general hospital. Here for sixteen months the group administered to the needs of the sick and the wounded, with wards continuously filled with battle casualties. In October, 1943, the 42nd began functioning in a new and better equipped hospital at Holland Park, Brisbane.

In May, 1945, the Hospital left for Manila. For a month the dental section was stationed in a staging area there. While engaged in setting up a hospital outside of Manila, the unit was assigned to the hospital ship *Marigold*. After two days at Okinawa the ship headed for Yokahama, arriving in that port several days before the signing of the surrender terms. The first medical unit to land in Japan, the 42nd disembarked and set up a clearing house for prisoners of war. Col. Dorsey was the first dental officer to land in Japan. Following two weeks of extremely interesting work in processing prisoners, the unit moved up to Tokyo, where for six weeks it was established in St. Luke's Hospital.

In Tokyo the remaining original members of the Maryland organization were separated from the service, leaving for home on October 23, 1945.

The 142nd General Hospital left Fort Riley on May 6, 1942, for San Francisco. It left the States on May 26, and arrived in Auckland, New Zealand, on June 13. For a fortnight the unit was quartered at Camp Papakura near Auckland. From Auckland the 142nd sailed for the Fiji Islands, arriving in Suva on June 28. From that port the unit was transported in trucks to Lautoka, on the western side of the island. In July the unit moved into a new hospital housed in tents. In November the Dental Clinic obtained its first permanent building setup. After a year in this location, the unit moved to a new, completely equipped hospital on the eastern side of the island near Suva. There it remained until September 1944. The 142nd arrived in Calcutta, India, in October. From there the original members of the Dental Service group returned to their homes.

The dental officers of the 42nd and the 142nd General Hospitals spent long tours of duty in faraway places. They sacrificed greatly to serve their country. They have returned to their homes and to the practice of their profession, with splendid records of service. These men, by the excellent services they rendered to the men who came under their care, achieved wide recognition for the highly meritorious manner in which they fulfilled their personal and professional responsibilities. These men whom we proudly honor have brought great credit to their alma mater and to their profession. Returned to civil life they have the deep satisfaction of knowing that their records form an impressive and lasting chapter in the history of their School.

1945 CLASS COMMENCEMENT

ON MAY 29, 1945, the Class of 1945 of the Baltimore College of Dental Surgery graduated. The commencement exercises were held in the Second English Lutheran Church. The Very Reverend Edward B. Bunn, President of Loyola College, Baltimore, gave the commencement address.

OMICRON KAPPA UPSILON

The commencement activities began with the annual convocation and dinner of the Phi Chapter, held at the Lord Baltimore Hotel on May 26. The address was given by Edward A. Doehler, Ph.D., Loyola College. Philip F. M. Gilley (U. of Md. 1913), presented by Dean Robinson, was inducted as an honorary member. The new members from the 1945 Class were presented by Dr. Vernon D. Kaufman: Albert Dunn, New Britain, Conn.; Rosario Gigliotti, New London, Conn.; Frank P. Gilley, Southwest Harbor, Me.; John E. McWilliams, Baltimore; Leon M. Mazzotta, Wildwood, N. J.; Ralph F. Menichino, Richmond Hill, N. Y.; James W. O'Hearn, Pittsfield, Mass.; Robert D. Voorhees, Manasquan, N. J.

Dr. Dorsey R. Tipton '39, a Faculty Member, was presented for induction by Dr. Harry B. McCarthy.

THE SENIOR AWARDS

The annual awards were presented by Dr. J. Ben Robinson, Dean, at the dinner of the National Alumni Association, held

at the Lord Baltimore Hotel, on May 28.

University Gold Medal for Scholarship: Frank P. Gilley.

Certificates of Honor: John E. McWilliams; Albert M. Dunn; Leon M. Mazzotta; Rosario Gigliotti; James W. O'Hearn.

Isaac H. Davis Memorial Medal for Cohesive Gold Filling: Nathan Price Baker, Charleston, W. Va. Honorable Mention: Frank Palmer Gilley.

Albert S. Loewenson Medal for Complete Oral Operative Restoration: Frank Palmer Gilley. Honorable Mention: Leon Mazzotta.

Alex H. Paterson Medal for Practical Set of Full Upper and Lower Dentures: John F. M. Keighley, Jr., Providence, R. I. Honorable Mention: James William O'Hearn.

Harry E. Kelsey Award for Professional Demeanor: Boyce A. Brawley, Mooresville, N. C.

Alumni Association Medal for Thesis: Frank P. Gilley. Honorable Mention: Gerald J. Rose, Suffolk, Virginia.

Award (contributed by Lt. Col. Edgar J. Jacques '17) for Meritorious Work in Practical Oral Surgery: Frank P. Gilley.

Keys awarded for Meritorious Work on the *Mirror*: Boyce Albert Brawley; Harry W. F. Dressel, Jr., Baltimore; Bruce T. Mathias, Waynesboro, Pa.; Rosario Gigliotti; Albert M. Dunn; Joseph R. Beard, Cornelius, N. C.; James William O'Hearn.

HONOR ROLL OF ALUMNI IN ACTIVE SERVICE

The names on this roster are additions to the lists published in the December 1943, the November 1944, and the September 1945 numbers of the JOURNAL.

1926

Lt. Col. Ralph W. Trent, 1380 Peabody Street, N.W., Washington, D. C.

1927

Major John P. Rohrbaugh, Ashford General Hospital, White Sulphur Springs, W. Virginia.

1928

Alfred D. Toye, 331st Med. Compl. Det., A.P.O. #565, c/o Postmaster, San Francisco, Calif.

1931

Allan M. Lankford, U. S. Naval Hospital, Bainbridge, Md.
Capt. Emanuel Shapiro, 0-1692194, Station Med. 1560 S.C.U., Camp Aetterbury, Indiana.

1932

Capt. C. S. Beamer, 0-535482, Station Hospital, L.A.A.B., Columbus-17, Ohio.

1933

Capt. George M. Barile, 0-534533, Station Hospital, N.O.P.E., New Orleans, La.

1936

Lt. Louis Milobsky, Sta. Camp., Fort Bragg, N. C.
Capt. Wesley E. Rogler.
Capt. Leonard J. Tarant, 0-360579, 73 Grand Ave., Newark, New Jersey.

1943

Lt. (j.g.) Roy J. Sloat. (November 1943), N.A.S. Kaneohe Bay, Navy #28, Oahu, T.H., c/o F.P.O., San Francisco, Calif.

1945

Lt. (j.g.) Alvin D. Aisenberg, USNR, U. S. Naval Training Station, Bainbridge, Maryland.
Lt. (j.g.) Nathan P. Baker, USNR, U. S. Naval Training Station, Bainbridge, Maryland.
Lt. (j.g.) Arturo Benavent, USNR, Navy Yard, Charleston, N.C.
Lt. (j.g.) Ralph M. Bishop, USNR, Disp. "C", Marine Corps, Base, San Diego, Calif.
Lt. (j.g.) Boyce A. Brawley, Dental Clinic A-5, Camp Peary, Va.
Lt. (j.g.) B. L. Brown, USNR, BOW, Unit A52, N.O.B., Norfolk, Va.
Lt. (j.g.) Harry W. F. Dressel, Jr., USNR, Brooklyn Navy Yard, Brooklyn, N.Y.
Frederick H. Feindt, USPHS Hospital, Sheepshead Bay, N. Y.
Lt. (j.g.) Eugene E. Flesher, USNR, Naval Air Base, Corpus Christi, Texas.
Lt. (j.g.) Robert A. George, USNR, U.S. Naval Receiving Station, N.O.B., Norfolk, Va.
Lt. (j.g.) Frank P. Gilley, USNR, Dental Clinic, Unit II, U.S.N.T.S., Newport, R.I.
Lt. (j.g.) Michael Giuliano, USNR, Main BOQ, MCAS, Cherry Point, N.C.

- Lt. (j.g.) John F. M. Keighley, Jr., USNR, Naval Base, Bainbridge, Maryland.
- Lt. (j.g.) Albert O'N. Grant, USNR, U.S. Naval Training Station, Bainbridge, Maryland.
- Lt. (j.g.) Robert Long, USPHS(R), U.S. Marine Hospital, Norfolk, Va.
- Lt. (j.g.) Melvin Luxemberg, Coast Guard Operating Base, Neah Bay, Washington.
- Lt. (j.g.) John E. McWilliams, USNR, U.S. Naval Training Station, Bainbridge, Md.
- John E. Markel, USPHS, Marine Hospital, Baltimore, Md.
- Lt. (j.g.) Bruce Trafton Mathias, USNR, Main BOQ, MCAS, Cherry Point, N.C.
- Leon M. Mazzotta, USPHS Hospital, Sheepshead Bay, N. Y.
- Lt. (j.g.) Harold Meinster, U.S. Marine Hospital, Pittsburgh, Pa.
- Lt. (j.g.) Bension Menasce, Asst. Dent. Surg., U.N.R.R.A.
- Lt. (j.g.) R. Menichino, USNR, BOQ, 1908, N.T.S., Newport, Rhode Island.
- Lt. (j.g.) Robert F. Merriam, USNR, room 70, BOQ, U.S.N.T.C., Gulf Port, Miss.
- Lt. (j.g.) Paul L. Noerr, USNR, US Naval Training Station, Norfolk, Va.
- James W. O'Hearn, Marine Hospital, Dental Clinic, Boston, Mass.
- Lt. (j.g.) Gerald J. Rose, USNR, U.S. Naval Receiving Station, N.O.B., Norfolk, Va.
- Lt. (j.g.) Abner T. Rowe, USNR, U.S.N.T.C., Bainbridge, Md.
- Lt. (j.g.) Robert D. Voorhees, USNR, U. S. Naval Training Station, Bainbridge, Md.
- Charles P. White, Dental Clinic, U. S. Marine Hospital, Norfolk, Va.

1946

- Lt. (j.g.) Alex Demyan, USNR, BOQ, Room 223B, U.S.N.T.C., Great Lakes, Ill.

1946

- Lt. (j.g.) Maurice J. Jurkiewicz, USNR, BOQ (223A) U.S.N.T.C., Great Lakes, Ill.
- Lt. (j.g.) Frank A. Kiernan, USNR, U.S.N.T.C., Dental Clinic 600, Great Lakes, Ill.
- Lt. (j.g.) Charles F. Moore, USNR, Dispensary, Naval Air Station, Patuxent, Md.

PROMOTIONS

All of these men were listed in previous issues of the Journal

1917

Col. Frederick S. Maier

1918

Com. A. A. Sussman

1924

Lt. Com. Wilson L. Miller

1925

Lt. Com. J. L. Alpert

1926

Capt. Robert E. Blair

1928

Lt. Col. Irving G. Aronson

1932

Lt. Com. R. B. Prather
Capt. J. L. Vajcovec

1933

Com. W. B. Chesterfield
Capt. Ralph J. Gordon
Capt. Emanuel Hoffman
Major Leon Seligman

1935

Capt. Louis F. Coroso

1937

Lt. Com. Frank G. Roh

1938

Major Wilbur N. Falk
Capt. J. S. Haggerty
Com. W. B. Johnson, Jr.
Com. Leonard L. Levin

1939

Capt. Irving W. Eichenbaum

1940

Capt. Sidney A. (Belinkoff) Bell.
Lt. Com. Samuel Goldhaber

1941

Lt. Com. Melvin R. Briskin
Lt. Com. J. P. Burch
Major Malcolm M. Parker
Capt. Murray Storch

1942

Capt. Woodrow W. Corder
Major James T. Criss
Capt. Paul Deneroff
Capt. Irvin O. Kolman

1943 (March)

Capt. Riley E. Spoon
Capt. John B. Zimmerman

1943 (November)

Capt. Joseph L. Berkeley
Capt. Robert H. Bernert
Capt. Bernard M. Capper
Lt. Herbert S. Fine
Lt. Harry R. Gibson
Capt. Henry S. Hohouser
Lt. Morton H. Hollander
Capt. Harold Hyman
Lt. Stanley Karesh
Capt. Jerome Kaye
Capt. Seymour Lehman
Capt. August R. Machen
Capt. Albert A. Reitman
Capt. Robert B. Rowland
Capt. Raphael Silverman
Capt. Leon Steinberg
Lt. Raymond K. Tongue
Lt. Edward Zuckerman

1944

Capt. Jack Brody
Lt. H. R. Bulitt
Capt. Charles Epstein
Lt. C. R. Gerber
Capt. John N. Mallon
Capt. Edward Leo Wheeler

ALUMNI NEWS

Walter E. Green (U. of Md. 1904), of Baltimore, stands out as one of the most loyal alumni in the history of our School. For forty-two years now he has kept in constant touch with both his Class and his School. During the Christmas holidays of 1944, for example, Walter received greetings of the season from 26 of his classmates or their widows. On graduation the Class numbered 65. Has there been, in the long history of the School, a class that can show a better record of loyalty among classmates and to their alma mater? The Editor is very pleased to publish the names and locations of the 26 of 1904 who wrote to their sterling representative in December of 1944:

John C. Bohnson, Portland, Maine; John C. Bowman, Woodstock, Va.; Harry L. Bradford, Baltimore; Millard C. Brobst, Wilmington, Del.; Archibald C. Brooks, Gloversville, N. Y.; J. Oscar Brown, Kansas City, Mo.; Charles E. Dare, Vineland, N. J.; Adolph Degenring, Elizabeth, N. J.; Bert E. Doyle, St. Johnsbury, Vt.; Enoch L. Ellison, Beckley, W. Va.; widow of Marwood S. George, Baltimore; George R. Gleason, Guadalajara, Mexico; Lynwood C. Holland, Suffolk, Va.; Ernest J. Jones, Norwich, Conn.; Edmund Kahn, Baltimore; William J. Koelz, Keyser, W. Va.; Harry C. Leib, Easton, Md.; Thomas F. Littlejohn, Fort Worth, Texas; Henry A. Palmer, Greenville, Va.; Alfred J. Piche, Burlington, Vt.; Jacob C. Reichley, York, Pa.; Charles H. Rogers, Newport, R. I.; William C. Shirley, Newmarket, Va.; Charles F. Smith, Kingston, Jamaica, B. W. I.; widow of Stanley B. Smith, St. John, New Brunswick, Canada; James M. Wallace, Spartanburg, S. Carolina.

Robert E. Baden (B.C.D.S. 1900) was the subject of a fine tribute published in an April issue of the *Enquirer-Gazette* of Upper Marlboro, Md. Over seventy years of age, Dr. Baden still has an amazing capacity for work. Since 1939 he has followed a schedule of practice covering seven days and six nights of each week. Well known all over Southern Maryland for his excellent work and his genial and generous character, he has practiced since World War I in Brandywine. Born in Woodville in 1875, he secured an elementary education there. At eighteen he was teaching a one-room school with eight grades of pupils. On Sundays he and a friend named Gibbons used to visit Dr. Ernest Sasscer, a dentist at Waldorf. Both young men became interested in dentistry and applied themselves to the difficult task of earning enough money to carry them through dental school. Dr. Baden earned his money by working a year in the postal service. The job involved two daily trips on a mail car between New York and Washington. In the early days of his practice there was no other dentist practicing between Marlboro and Annapolis and he served patients from all over Anne Arundel and Calvert Counties. There were also many patients from Prince George's, Charles and St. Mary's Counties. A visit to his office would prove an interesting experience to any of his professional brethren. Dr. Baden has always worked alone. Up until a few years ago he did not have an office telephone. He used to enjoy the brief respites from his chair duties he secured by going downstairs to the general store for his calls. There are probably only a very few of our alumni who still use the foot-treadle.

Dr. Baden tried an electric drill but decided to go back to the old way because he could have better control of his work with the foot-power apparatus. Undoubtedly he enjoys an unusual distinction in the fact that he has pulled ten of his own teeth. His reason is that "I just feel like doing it myself." One phase of Dr. Baden's practice might very well be followed by every member of the profession. As his interviewer, a devoted patient, put it: "All the time he is working, he explains what he is doing."

(The Editor wonders if the two dentist friends of Dr. Baden are P. E. Sasscer, B.C.D.S. 1892, and R. E. Gibbons, B.C.D.S. 1900.)

In February the Johns Hopkins Hospital appointed B. Lucien Brun (B.C.D.S. 1905) as head of the dental department of the Hospital. Dr. Brun succeeds H. Hayward Streett (B.C.D.S. 1899), who has retired from professional life. In announcing the appointment, Dr. Winford H. Smith, director of the Hopkins, said: "Dr. Brun has been on the Hopkins staff for many years. He is recognized as one of the outstanding men in the field of dentistry. We consider ourselves very fortunate that he has agreed to accept the post." Dr. Brun, who was closely associated with the development of the dental department at the Hopkins, has been head of the oral surgery section since its formation in 1912. He is also chief of the dental staff at the Union Memorial Hospital and a member of the staff of four other hospitals. For many years he has served on the State Board of Dental Examiners. He is a former president of the Maryland State Dental Association and vice-president of the A. D. A. He was general chairman of the notable Dental Centenary held in Baltimore in 1940. Prior to entering the service in 1917 Dr. Brun was for several

years a member of the B.C.D.S. faculty, as demonstrator, lecturer and professor, respectively. During the first World War he served overseas with the rank of major. Dr. Brun is a fellow of the American College of Dentists. The International Academy of Dentistry awarded him the decoration with silver palms.

Charles H. Sheetz, Jr., '46 announced in August the opening of his office for the general practice of dentistry. Dr. Sheetz is associated with Arthur I. Bell, 416 Medical Arts Building, Baltimore.

PERSONALS

Lt. and Mrs. William Cirrito '43 (March) announce the birth of a daughter, Mary Paula, on August 25, 1945.

Lt. and Mrs. N. J. Santaniello '43 (November) announce the birth of a son, Nicholas, on February 19, 1946.

Dr. and Mrs. Frank P. Gilley '45 announce the birth of a daughter, Mary Ellen, on December 14, 1945.

Dr. and Mrs. John P. Blevins '43 (March) announce the birth of a son, John Jeffrey, on December 22, 1945.

Lt. (j.g.) and Mrs. C. W. Hennesey '44 announce the birth of a son, John, on March 10, 1946.

Capt. and Mrs. C. V. McMillin '38, announce the birth of a son, Clarence Jr., on May 21, 1946.

Dr. and Mrs. Carl E. Bailey '38 announce the birth of a daughter, Kathryn Elliott, on May 24, 1946.

Capt. and Mrs. Walter B. Stillwell '43, (November) announce the birth of a son, Walter Brooks III, on July 30, 1946.

Dr. and Mrs. Steward Everson '42, announce the birth of a son, John Stewart, on June 30, 1946.

Dr. Alexander L. Richardson '34 married Marian Martin on August 8, 1945.

Capt. James A. Fulmer, Jr. '37 married Sarah Louise Griffin on August 25, 1945.

Capt. Henry R. Lasch, Jr. '42 married Elizabeth Berryman Simpson on July 2, 1945.

Capt. Walter B. Stillwell, Jr. '43 (November) married Lt. Selpha Theresa Everson, ANC, on September 17, 1945.

Dr. Fred Feindt '45 married Charlotte Mary Dean on September 29, 1945.

Dr. John Owen O'Meara (March '43) married Elizabeth Kozlak on December 3, 1945, at Torrington, Conn. Jack recently visited the *Journal* office on his terminal leave.

Lt. (j.g.) Abner T. Rowe '45 married Jane Martin on November 1, 1945.

Capt. Bernard Jerome '36 married Gloria Bloch on August 15, 1945.

Capt. Alan H. Herman '42 married Jane Abelson Simon on January 1, 1946.

Dr. Ralph M. Bishop '45, married Norma Jeanne Hensler on November 3, 1945.

Lt. Henry John Gemski '38 married Genevieve Frances Sigsworth on March 5, 1946.

Dr. George Hooz '46 married Thelma Riva Keyser on March 10, 1946.

Capt. Paul B. Castelle '41 married Daphne Clark on October 15, 1945.

Dr. Frank A. Kiernan '46 married Oliva Schneider on December 22, 1945.

Lt. Harry Vernon Borg '44 married Eunice Elsie Anderson on February 2, 1946.

Lt. Lloyd E. Church '44 married Florence Rayall Ellis on May 4, 1946.

Dr. Marcy Lee Shulman '35 married Rosemary Stanger on May 31, 1946.

Dr. Michael S. Varipatis '39 married Stella Klosteridis on June 16, 1946.

Dr. George Robert McLean '46, married Jane Marie Biesecker on June 29, 1946.

Dr. Eugene M. Nelson '46 married

Jane Florence Sapinsley on July 15, 1946.

Dr. and Mrs. Daniel E. Berman '41 announce the birth of a son, Joel Lee, on January 2, 1946.

Dr. and Mrs. Stanley H. Karesh '43 (November) announce the birth of a daughter, Fern Snyder, on May 12, 1946.

OBITUARY

Philip E. Clark (B.C.D.S. 1905) of Newport, R. I., died February 16, 1943.

Ernest Bent (B.C.D.S. 1891) of Braintree, Mass., died March 16, 1945.

Francis P. Hamlet (B.C.D.S. 1884) of Hempstead, N. Y., died August 6, 1945.

Ray A. Vawter (U. of Md. 1928) of Hyattsville, Md., died September 10, 1945.

W. H. Morrison (U. of Md. 1927) of Burlington, Vt., died in December 1945.

L. O. Herring (U. of Md. 1927) of Charlotte, N. C., died January 4, 1946.

Louis W. Crosby (B.C.D.S. 1902) of Washington, D. C., died November 23, 1945.

Stanley G. Jackson (U. of Md. 1903) of Nova Scotia, died June 21, 1945.

G. W. LaLiberte (B.C.D.S. 1905) of Miami, Florida, died November 1944.

Thomas M. Canning (B.C.D.S. 1912) of Providence, R. I., died February 6, 1946.

Arthur J. Lynch (U. of Md. 1911) of Wakefield, R. I., died February 16, 1946.

Maurice D. Corrigan (U. of Md. 1917) of Sandy Hook, Conn., died December 28, 1945.

James E. Ryan (U. of Md. 1926) of Houston, Mass., died December 7, 1945.

Ernest J. Jones (U. of Md. 1904) of Norwich, Conn., died February 28, 1946.

Benjamin F. Copp (U. of Md. 1895) of Albuquerque, New Mexico, died June 22, 1945.

Milledge G. Munro (B.C.D.S. 1899) of Gardner, Mass., died in August 1945.

Herbert W. Atchison (U. of Md. 1908) of Clarksburg, W. Va., died June 26, 1945.

Worth O. Smith (B.C.D.S. 1903) of Tunkhannock, Pa., died October 20, 1945.

Otis W. Elzey (B.C.D.S. 1898) of Washington, D. C., died October 4, 1944.

E. J. Lawler (B.C.D.S. 1909) of Norfolk, Va., died July 14, 1945.

Walter C. Kylander (U. of Md. 1920) of Etna, Pa., died December 30, 1945.

W. E. Proctor (U. of Md. 1886) of Sheffield, Alabama, died May 17, 1945.

Robert W. Eicholtz (U. of Md. 1892) of Syracuse, N. Y., died October 14, 1945.

John L. Hennessey (B.C.D.S. 1906) of Taunton, Mass., died October 9, 1945.

J. H. Flamster (U. of Md. 1903) of Frankfort, Ky., died June 16, 1945.

William Edwin Beachley (U. of Md. 1890) of Hagerstown, Md., died July 8, 1945.

Carl Dinger (B.M.C. 1902) of Philipsburg, Pa., died December 23, 1945.

Anthony H. Mathieu (U. of Md. 1892) of Bedford Hills, N. Y., died January 11, 1946.

Travis F. Epes (U. of Md. 1907) of Roanoke, Va., died October 8, 1945.

Joseph C. Yunker (B.C.D.S. 1912) of Montclair, New Jersey, died January 30, 1945.

Walter B. Siwinski (B.C.D.S. 1906) of Baltimore.

Charles P. Rice (B.C.D.S. 1891) of York, Pa., died January 9, 1946.

Edward Tully (U. of Md. 1936) of Hartford, Conn., died November 30, 1945.

Frank J. Shugrue (U. of Md. 1924) of Hartford, Conn., died in May 1946.

Frank A. Motis (B.M.C. 1904) of Omaha, Nev., died February 15, 1945.

Hampton K. Smith (U. of Md. 1889) of Union, S. C., died May 19, 1946.

David C. Clark (B.C.D.S. 1898) of Morgantown, W. Va., died May 4, 1945.

Benjamin Rush Powell (B.C.D.S. 1901) of Baltimore died June 14, 1945.

Albert J. Demero (B.C.D.S. 1921) of Providence, R. I., died in April 1946.

J. T. Boyd (B.C.D.S. 1902) of Brewton, Ala., died September 6, 1945.

John T. Manley (U. of Md. 1919) died in Baltimore on March 18 after a long illness. Born in Holyoke, Mass., Dr. Manley received his preliminary education at St. John's Prep in Danvers, Mass. Following his graduation he entered practice in Baltimore. He is survived by his wife, formerly Miss Elizabeth Royston of Baltimore; four children: Elizabeth and Mary Manley and John T., Jr., and Joseph F. Manley. Other survivors are two sisters, Mrs. David Foley and Mrs. William Taylor of Boston and a brother, Anthony Manley, of Paris.

J. Frank Manley (U. of Md. 1917), brother of John, died suddenly of a heart attack on June 25. A native of Holyoke, Mass., Dr. Manley received his predental education at Georgetown. After his graduation from Maryland as president of his class, he began practice in Baltimore. He was a past president of the Baltimore City Dental Society. He is survived by his wife, Estella Parr Manley, whom he married in 1945.

Fred E. Wilson (B.M.C. 1910) died in Baltimore on December 20, 1945. Dr. Wilson was born in New York State and entered the Baltimore Medical College from that state. Following his graduation he returned to New York but soon came back to Baltimore to begin practice. He was located for 28 years in the Overlea section of the city. Dr. Wilson is survived by his wife, Mrs. Elsie H. Wilson.

Harry E. Kelsey (B.C.D.S. 1896), internationally known for his contributions and leadership in the field of orthodontics, died in Baltimore on March 1.

Doctor Kelsey was born and educated in Pomona, Kansas. In 1903 he married Miss Eva Hamill of Baltimore, who survives him. Early in his practice Doctor Kelsey became interested in orthodontics and in 1908 attended the Angle School of Orthodontia. From 1906 to 1910 he served as lecturer on orthodontics at the B.C.D.S. Advanced to a professorship in 1910, he continued his very valuable contributions to the training of hundreds of future practitioners until 1923. With the founding of the dental staff at the Johns Hopkins Hospital he was placed in charge of the work in orthodontics. He was associated with the Hospital until his retirement from practice in 1940. Doctor Kelsey was a prolific contributor to dental literature, having published over one hundred articles and reports. He was a member of Omicron Kappa Upsilon, a fellow of the American College of Dentists, and a member of the European Odontological Society. He was a former president of the Maryland State Dental Association, the New York Society of Orthodontists, the Southern Society of Orthodontists, the Washington-Baltimore Society of Orthodontists, and the American Board of Orthodontists. Doctor Kelsey served as chairman of the Committee of International Relations of the Dental Centenary held in Baltimore in 1940. He was chairman of the board of trustees of the Clarence J. Grieves Library Foundation and was a member of the executive board of the Research Commission of the American Dental Association. As a practitioner, as a teacher, as a writer and as a leader, Doctor Kelsey made a strong and versatile imprint on his profession. He merited well all the honors conferred upon him by his confreres. His name belongs on the roll of the great alumni of the oldest dental school.

Harry M. Stumpf (U. of Md. 1906), of Reisterstown, Md., died on July 6. Dr.

Stumpf had practiced in Reisterstown since his graduation. He was vice-president of the Pikesville Bank. His survivors include his wife, formerly Grace Ankeney; a daughter, Mrs. Kriete Osborn; and a sister, Mrs. Alvey Conway.

Wallace D. Gibbs (U. of Md. 1914) died on July 23, 1944, in Charlotte, N. C. Dr. Gibbs received his early education in the public schools of Fayetteville, N. C., and was a graduate of Trinity College, now Duke University. Following his graduation from Maryland he took a year's postgraduate work at Columbia in periodontology. In the first World War he served as a captain in the Dental Corps with the 30th Division and was in France for two years. On his return to the States he practiced for six years in Fayetteville. He then moved to Charlotte, where he began a practice limited to periodontology. He was a past president of the Charlotte Dental Society. Dr. Gibbs was well known throughout the South as a clinician and presented clinics and papers before many state, district, and local dental societies in the Southern and Eastern states. He was married to Miss Mildred Thompson in 1920, by whom he is survived. Three sons also survive him: Wallace D., Jr., an Army officer in the second World War; Jon, a 1946 honor graduate in dentistry at Loyola in New Orleans; and Richard F. Gibbs of Charlotte.

Herbert Phillips (B.C.D.S. 1885) died in Baltimore on November 23, 1945. Dr. Phillips, 84, one of the oldest active dentists in Maryland, came to the B.C.D.S. from Massachusetts. He was a member of the faculty for several years following his graduation. Surviving are his wife, Mrs. Clara Phillips; a daughter, Mrs. Elvira Wagner; and a son, Herbert Phillips, Jr., all of Baltimore.

Major John R. Switzer, Jr., '36, who was separated from the Army in Septem-

ber of 1945 after over four years of serving, died in Harrisonburg, Virginia, on January 30. Born in Harrisonburg in 1913, Dr. Switzer entered this School following a year of pre dental training at Washington and Lee University. After receiving his degree he studied oral surgery at Harvard. He practiced for three years in his home town before entering the service. Enlisting in the 29th National Guard Division, he was commissioned a first lieutenant in February of 1941. After assignments at Camp Meade, A. P. Hill M.R., Camp Pendleton, Fort Benning, Camp Blanding and Camp Kilmer, he embarked for the European Theater in September of 1942. After 18 months of training and service in England, Major Switzer landed on Omaha Beach with the 29th. He later participated in the Normandy, Northern France, Rhineland and Central Europe campaigns. He was awarded the Bronze Star medal for meritorious service. Dr. Switzer is sur-

vived by his parents, County Clerk and Mrs. J. Robert Switzer; a sister, Mrs. Lewis Funkhauser, of Hagerstown, Maryland; and by his wife, the former Virginia Ramsey, whom he married in June of 1942.

William L. Kibler (U. of Md. 1913) died in Charlotte, N. C., on April 27, 1944. Born in Pomaria, S. C., in 1889, Dr. Kibler attended the county schools of Newberry, S. C., and then entered Newberry College, receiving a bachelor of arts degree. After graduating in dentistry he practiced in Lexington, N. C., until he enlisted in 1918 with the commission of first lieutenant in the dental corps. Following his discharge in April of 1919, he began his practice in Charlotte. He was a past president of the Charlotte Dental Society. He devoted a great deal of his time to the affairs of his community and his church. Dr. Kibler is survived by his wife, formerly Miss Mildred Hackney, whom he married in 1926.

DR. DOBBS HONORED BY NETHERLANDS GOVERNMENT

Dr. Edward C. Dobbs, Associate Professor of Pharmacology, was selected by the Netherlands government as one of nine prominent men in American dental education to constitute the Ivory Cross Expedition. The group sailed for Antwerp on June 26.

The unit was created as the result of the desire of the Netherlands government to lend greatly needed aid and encouragement to the dentists of that country. Because of the wartime lack of materials necessary to their practices and because of restrictions and other hardships imposed by the invading Nazis, the majority of the Dutch dentists have been greatly handicapped in their efforts to resume their practices. The visiting American dentists, representing all the fields of dental science and practice, began a series of lectures and demonstrations on July 15, at the Auditorium in Amsterdam. Attending the month of instruction were 200 Dutch Dentists and 100 dentists from other European countries. The Ivory Cross unit, in addition to helping their European professional brethren to regain their former skills and knowledge, presented a review of the progress made in the profession since the outbreak of World War II.

A dentist whose surname was Moss,
Fell in love with the charming Miss Ross;
But he held in abhorrence
Her Christian name Florence,
So he called her his dear Dental Floss.

A wondrous faith-healer one day,
Had to keep all his patients at bay,
While he hid in his booth,
With a riotous tooth,
Which his faith couldn't stop, strange to say.

A dentist who lives in Duluth
He wedded a widow named Ruth,
Who is so sentimental
Concerning things dental
She calls her dear Second her Twoth.

A two-toothed old man of Arbroath
Gave vent to a terrible oath.
When one tooth chanced to ache,
By an awful mistake
The dentist extracted them both!

